


MEMORANDUM

TO: Docket Control

FROM: Ernest  Johnson  
Director  
Utilities Division

DATE: November 4, 2004

RE: STAFF REPORT ON BILLING ESTIMATION AND METER READING ISSUES  
IN THE MATTER OF ARIZONA PUBLIC SERVICE COMPANY'S REQUEST  
FOR RATE ADJUSTMENT (DOCKET NO. E-01345A-03-0437)

Attached is Staff Report on billing estimation and meter reading issues in the matter of Arizona Public Service Company's request for rate adjustment.

EGJ:EAA:rdp

Originator: Erinn Andreasen

Attachment: Original and thirteen copies

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Service List for: Arizona Public Service  
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**STAFF REPORT  
UTILITIES DIVISION  
ARIZONA CORPORATION COMMISSION**

**ARIZONA PUBLIC SERVICE COMPANY**

**DOCKET NO. E-01345A-03-0437**

**STAFF REPORT ON BILLING ESTIMATION AND METER READING ISSUES**

**NOVEMBER 2004**

## STAFF ACKNOWLEDGMENT

The Staff Report on billing estimation and meter reading issues in the matter of Arizona Public Service Company's Request for Rate Adjustment, Docket No. E-01345A-03-0437, was the responsibility of the Staff member listed below.

A handwritten signature in black ink, appearing to read 'E. J. Andreassen', with a stylized flourish at the end.

Erinn Andreassen  
Public Utilities Analyst

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## **Introduction**

The purpose of this report is to provide the Commission with an update on the status of Staff's investigation into Arizona Public Service Company's bill estimation and meter reading practices. This report addresses the status of three separate but related matters: APS' Application for a Declaratory Order, the Complaint filed by Avis Read, and Staff's generic inquiry into APS' billing estimation and meter reading practices. Staff has contracted with Barrington-Wellesley Group, Inc., a consulting firm specializing in management review and compliance audits, to conduct an in-depth investigation into APS' meter reading and bill estimation practices. Although this report does not offer final conclusions on these matters, it does identify a number of concerns that merit further investigation.

## **History of Relevant Proceedings, Activities, and Decisions**

### **I. The Read Complaint in Superior Court**

On June 4, 2002, Avis Read ("Read") filed a complaint in the Superior Court of the State of Arizona against APS. Read alleged that APS had failed to read her meter for months at a time, that APS' estimates of her energy consumption tended to result in higher bills, that APS' estimated bills did not accurately approximate actual usage and demand, and that APS intentionally engaged in this conduct. (June 4, 2002 Compl. at 6). Read also alleged that APS has failed to employ sufficient numbers of meter readers, has systematically failed to read its customers' meters, and has arbitrarily estimated electric consumption and demand, thereby overcharging its customers. (June 4, 2002 Compl. at 2, 4, 6-8). Read also claimed that APS has failed to obtain Commission approval of its estimating procedures, thereby violating Arizona Administrative Code ("A.A.C.") R14-2-2-210(A)(5), which prohibits a utility from estimating a bill if the utility's estimation procedures have not been approved by the Commission.

Read subsequently conducted discovery, and both APS and Read prepared various pretrial pleadings. The case was eventually dismissed in August of 2004.

### **II. APS' Application for a Declaratory Order**

On October 22, 2003, while the Superior Court case was still pending, APS filed with the Commission an Application for a Declaratory Order regarding bill estimation procedures. In its Application, APS raises a number of legal issues. Chief among them is the contention that APS is exempt from A.A.C. R14-2-210(A)(5) and is therefore not required to obtain Commission approval of its bill estimation procedures. In the alternative, APS also asks the Commission to approve its bill estimation procedures.

In its Application, APS appears to suggest that its legal arguments related to the applicability of A.A.C. R14-2-210(A)(5) entirely dispose of these issues. Staff, however, has been—and continues to be—concerned that this view oversimplifies the issues. Staff did not believe that it would be wise to recommend approval of APS' estimation procedures as filed in



the APS application for a declaratory order in light of the claims raised by Avis Read until a more detailed investigation into the appropriateness of APS' procedures could be completed.

Staff believes that APS has a duty to provide adequate and reliable service to its customers upon reasonable terms and conditions. Read's allegations raise questions about the fairness, adequacy, and reasonableness of APS' bill estimation and meter reading procedures. Therefore, even if APS is not required to obtain Commission approval of its bill estimation procedures, Staff initially concluded that an examination of APS' bill estimation procedures is warranted. The question, then, was how best to accomplish that analysis.

### III. Process Standardization Working Group ("PSWG")

The PSWG was established in 1999 after the Commission's enactment of the retail electric competition rules. Its members include representatives from utilities, Staff, and other industry representatives. The PSWG develops methods for standardizing certain transactions and procedures necessary for the implementation of retail competition.

In November of 2003, the Chair of the PSWG suggested to Staff that the PSWG would be an appropriate forum to discuss and explore the development of a statewide standard for estimation procedures. Because of its collaborative nature, its technical expertise, and its history of developing state standards, Staff believed that the PSWG would be able to provide information that would assist Staff in its evaluation of APS' bill estimation procedures.

The group began meeting to discuss the issue of estimation procedures January 15, 2004. To date, the group has met a total of nine times. Although the group has not finalized its proposed recommendation, the group's October 15, 2004, draft document addresses the following subjects:

- identifies certain general estimation principles;
- defines key terms common in the industry and related to estimation practices;
- describes situations in which estimation may occur; and
- identifies various ways in which PSWG participants currently derive estimated usage and demand.

The PSWG process has been valuable in identifying certain utility processes and in reaching a common understanding among utilities of definitions and situations where estimation is required. As a result of the work of the PSWG, APS made certain amendments to its Application for a Declaratory Order.

However, as the process advanced, it became harder for the group to develop a detailed standard because systems and processes for most utilities differ. Although the PSWG's draft provides helpful background information, it does not suggest standards for bill estimation. Instead, it primarily summarizes the existing procedures of the group's various members. On October 29, 2004, the Director of the Utilities Division sent a letter to the Chair of the PSWG

requesting that the PSWG attempt to identify “best practices” for estimation<sup>1</sup>. This information will help Staff to determine whether current practices are sufficient or require improvements.

Although the PSWG process was initiated because of allegations related to APS, this process may ultimately have broader implications. To the best of Staff’s knowledge, no incumbent electric utility has filed for Commission approval of its estimation procedures. If such approval is ultimately required, the Commission may have to address these issues for other electric utilities.

#### IV. The Read Complaint before the Commission

On August 19, 2004, the Superior Court dismissed Read’s complaint, concluding that the Commission has primary jurisdiction over this matter. On September 9, 2004, Read filed a complaint before the Commission, raising allegations similar to those raised in her Superior Court complaint.

On November 2, 2004, the Commission’s Hearing Division issued a procedural order consolidating APS’ Declaratory Order Application and the Read Complaint. The consolidated cases were also set for hearing.

#### V. Staff’s Inquiry into APS’ Meter Reading and Bill Estimation Practices

On September 24, 2004, Staff issued an RFP for consulting services related to APS’ meter reading and bill estimation practices. Staff has retained a consultant to assist Staff with its evaluation of these issues. Staff believes that a consultant is appropriate for two reasons: first, several commissioners have filed letters in the docket that express concern over these issues; and second, the PSWG process, although helpful, is unlikely to produce the definitive standard that Staff had hoped for.

Staff understands that the Commission would like an in-depth and thorough examination of APS’ practices and procedures. Through the discovery process, Staff has requested information from APS including but not limited to the following topics<sup>2</sup>:

- The quantification of estimations and service counts since 1995 by rate class. Staff believes that a ten-year period will provide a reasonable sample for analysis of estimated bills.
- Meter reader practices and procedures including training materials and handbooks.
- Staffing levels over the past ten years and staffing considerations for meter readers.
- CIS billing software and system capabilities.
- Procedures utilized for the estimation of demand, energy, and off-and on-peak periods.
- Information regarding Avis Read's complaint.

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<sup>1</sup> Exhibit A - October 29, 2004, Letter from the Director of the Utilities Division to the Chair of the PSWG.

<sup>2</sup> Exhibit B – Data requests issued in Staff's Inquiry into APS' Meter Reading and Bill Estimation Practices.

- Details regarding thirty-five other customers who have provided informal complaints with the Commission related to estimation.
- The extent to which APS utilizes a customer's historical data in the estimation of demand.
- The number of demand meters installed in the field.
- Load research information.

In addition, on October 29, 2004, Staff issued discovery to other jurisdictional electric utilities, as well as two municipalities. Staff has requested a detailed description of the utilities' estimation procedures and the extent to which the utilities consider a customer's historical usage in the estimation process.

Staff has also identified additional areas of concern that will be explored further along with the claims set forth in the Read Complaint.

Staff provides this report to apprise the Commission of the status of these matters.

### **Staff Analysis**

The issues raised by APS' Application for a Declaratory Order and the Read Complaint require a detailed technical analysis of meter reading and estimation procedures as well as an independent verification of billing data and procedures. Although these cases also raise legal issues, this report focuses on the technical issues.

At the heart of the estimation issue is whether the utility has the ability to true up a customer's bill to reflect actual usage. In most cases, kilowatt-hour (kWh) usage can be trued up when the utility obtains a subsequent read. Therefore, the customer will only be paying for the energy that was actually used. However, for customers on rates with a demand or kilowatt (kW) component, when a read is estimated, it cannot be trued-up to reflect actual kW. This occurs because a demand meter must be physically probed and reset at the beginning of each billing cycle. If a meter reader is unable to obtain a read and reset the meter, any subsequent demand reads will reflect the highest peak demand from the time of the last read/reset until the time of the next read. For instance, a demand meter that is read and reset on August 31st and is not read and reset until October 31st will register a read showing the highest peak demand over the full two-month period. It is impossible to determine what the customer's demand actually was for each of the months of September or October. Therefore, Staff is primarily concerned with estimation procedures related to demand.

I. Estimation of Demand - The utilization of class average data when customer specific data is available

As a result of participation in the PSWG process, Staff became aware that APS' procedures for the estimation of demand are somewhat different than those of other utilities participating in the group. This difference specifically pertains to the use of class average data as

opposed to customer specific data in the estimation of demand. APS' estimation formula is listed below.

$$\text{Estimated Demand} = \frac{\text{kWh consumption (actual or estimated)}}{\text{Class Average Load Factor} \times \text{No. Read Days} \times 24 \text{ Hours}}$$

The class average load factor measures the degree to which energy is consumed compared to maximum demand. The higher the load factor, the greater the uniformity of demand over a period of time for a particular customer class.

APS' estimation formula includes the use of a class average load factor in the estimation of demand. It is possible that the use of a class average load factor may not accurately reflect an individual customer's usage pattern. For instance, certain customers may actually have a higher load factor than the class average load factor used in APS' estimation formula. This could result in a demand estimate that would be overstated relative to a particular customer's historical demand.

In addition, the Commission's regulations suggest a preference for the use of customer specific data when estimating customer bills. An excerpt from the 210 series regarding billing and collection is provided below:

R14-210(A)(2)      Each billing statement rendered by the utility or billing entity shall be computed on the actual usage during the billing period. If the utility or Meter Reading Service Provider is unable to obtain an actual reading, the utility or billing entity may estimate the consumption for the billing period giving consideration to the following factors where applicable:

- a.      The customer's usage during the same month of the previous year.
- b.      The amount of usage during the proceeding month.

APS suggests that its process for estimating demand complies with 210(A)(2) (a) and (b) because the rule permits APS to use factors other than historical usage<sup>3</sup>. However, in a 2002 e-mail, one of APS' employees suggests that using a customer specific load factor is an optimal approach in the estimation of demand<sup>4</sup>. In discovery responses, APS explains that it could be costly to alter its billing system to accommodate this type of change. It should be noted, however, that prior to September 14, 1998, APS' system utilized customer specific usage and used a customer specific average load factor in the estimation of demand.

Staff needs to evaluate the appropriateness of the class average load factor variables that APS has applied in the estimation of demand since the implementation of its new billing system

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<sup>3</sup> Exhibit C – APS response to Staff 1-9 received by the Utilities Division on September 17, 2004

<sup>4</sup>Exhibit D - June 18, 2002, email from Janet Smith.

in 1998. APS has indicated that the load factors that were initially implemented were changed in July 2002 based on ongoing load research information.

Staff will be investigating the impact of using APS' demand estimation methodology. Specifically, Staff's consultant will be examining the appropriateness of APS' procedures in regard to the estimation of demand and will be performing calculations to determine whether customers are harmed by the utilization of class average load data.

#### I. Computer problems leading to the failure to bill customers in a timely manner

Through the discovery process, Staff has become aware of certain issues related to APS' billing system. Specifically, from September 1999 to February 2000, APS experienced a software problem that prevented APS from sending bills to a small portion of its customers. This computer problem affected Avis Read's account. According to APS, 663 customers, including Avis Read, did not receive bills for a period of time ranging from one to six months<sup>5</sup> during this timeframe. Avis Read did not receive a bill for a six-month period of time. When she finally did receive a bill, it was in the thousands of dollars. The majority of the 663 customers affected by this problem missed their billing statements for one to three months.

Staff believes that billing on a timely basis is an important service to the consumer and prevents the rate shock that can occur when a customer receives a bill for multiple months of utility service. Commission rule A.C.C. R14-2-210 requires each utility or billing entity to render a bill for each billing period for each customer in accordance with the customer's tariff. While this may be an isolated instance, Staff will be investigating this matter further.

#### II. Number of meter readers

The Read Complaint filed in Arizona Superior Court questions the appropriateness of the number of meter readers that APS employs. The Read Complaint suggests that the number of meter readers employed is inadequate to accurately read each of its customers' meters. Through discovery, Staff has learned that APS currently employs 158 meter readers. Staff has not determined whether this number is adequate or inadequate. Staff will be analyzing the appropriateness of the number of meters utilized, staffing considerations, and the ability of the meter readers to service their accounts.

#### Summary

Staff believes that the issues raised by the Read Complaint are important to evaluate in the context of APS' meter reading and bill estimation practices generally. Specifically, Staff will need to evaluate the issues raised by the Read Complaint and APS' procedures as a whole in order to make a recommendation for approval of APS procedures by the Commission. Pursuant

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<sup>5</sup> Exhibit E - APS response to Staff 3-19 received by the Utilities Division on October 27, 2004.

to the Procedural Order issued on November 2, 2004, Staff will file its initial report on the reasonableness of APS' bill estimation and metering practices on December 17, 2004.

Staff also believes that at the conclusion of the investigation into the Read Complaint, the Commission should assess whether all jurisdictional electric utilities should be required to file estimation procedure tariffs with the Commission. This would provide a set of transparent procedures that both electric consumers and Commission Staff can utilize in processing consumer complaints and in evaluating utility practices.

## **Exhibit A**

**COMMISSIONERS**  
MARC SPITZER - Chairman  
WILLIAM A. MUNDELL  
JEFF HATCH-MILLER  
MIKE GLEASON  
KRISTIN K. MAYES



BRIAN C. McNEIL  
Executive Secretary

**ARIZONA CORPORATION COMMISSION**

October 29, 2004

Ms. Evelyn Dryer  
Process Standardization Working Group, Chair  
Tucson Electric Power Company  
4350 E. Irvington Rd.  
P.O. Box 711  
Tucson, AZ 85714

Re: Draft Process Standardization Working Group Meter Read Estimating Rules and Procedures

Ms. Dryer:

In January 2004, the Process Standardization Working Group (PSWG) began meeting in an effort to establish a statewide standard for estimation procedures. At that time, Staff believed that the PSWG would be an appropriate forum to develop such a standard because of its collaborative nature and its history of developing state standards for the implementation of Direct Access.

I have reviewed the October 15, 2004 *draft* Meter Read Estimating Rules and Procedures document sent out to the PSWG members. In my view, the document identifies certain general estimation principles, defines key terms common in the industry, describes situations in which estimation may occur, and generally identifies various ways in which PSWG participants derive estimated usage and demand in certain situations.

While this document provides a helpful summary of certain procedures that are currently being utilized, it would be extremely valuable for the group to develop a recommendation regarding best practices for estimation. Such an evaluation will also aid the Utilities Division and Commission in exploring whether current practices are sufficient or could be improved in the development of potential future standards or rules regarding estimation.



It is my understanding that the group is still in the process of finalizing its work product. I would request that the group attempt to identify best practices for estimation procedures and incorporate this analysis into its final report.

Sincerely,

A handwritten signature in black ink, appearing to read 'E.G. Johnson', with a long horizontal flourish extending to the right.

Ernest G. Johnson  
Director, Utilities Division

EGJ:

## **Exhibit B**

COMMISSIONERS  
MARC SPITZER - Chairman  
WILLIAM A. MUNDELL  
JEFF HATCH-MILLER  
MIKE GLEASON  
KRISTIN K. MAYES



BRIAN C. MCNEIL  
Executive Secretary

## ARIZONA CORPORATION COMMISSION

December 5, 2003

Data Request: Staff 1

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Snell & Wilmer L.L.P.  
One Arizona Center  
400 E Van Buren  
Phoenix, AZ 85004

Re: Application of Arizona Public Service Company for a Declaratory Order  
Regarding Bill Estimation Procedures Docket No. E-01345A-03-0775

Dear Mr. Mumaw,

In reference to Arizona Public Service Company's Application for A Declaratory Order Regarding Bill Estimation Procedures, dated October 22, 2003, please provide Staff with the following information:

- 1) Is a response to this application needed within a particular timeline? If so, what dates should staff be aware of?
- 2) Does APS plan to use a response by the Commission in pending or future litigation? If so, how might APS make use of a Commission response?
- 3) Would a common meter estimation design developed by the Process Standardization Working Group and approved by the Director of the Utilities Division or Commission change your request in any way? If so, how would such a decision impact your request?
- 4) Please identify any occasion in which the Commission has indicated approval of the current estimation procedures used by APS.
- 5) Please identify any occasions in which Utilities Division Staff has indicated approval of the current estimation procedures used by APS.
- 6) Is the 'Estimating Methodology' contained in Exhibit C of the Application a comprehensive explanation of the APS estimation procedures? If other documents or text exist that further define the procedures, please submit them.

1200 WEST WASHINGTON STREET; PHOENIX, ARIZONA 85007-2927 / 400 WEST CONGRESS STREET; TUCSON, ARIZONA 85701-1347  
[www.cc.state.az.us](http://www.cc.state.az.us)

This document is available in alternative formats by contacting Yvonne McFarlin, ADA Coordinator, voice phone number 602-542-3931, E-mail [YMcFarlin@cc.state.az.us](mailto:YMcFarlin@cc.state.az.us)

Page 2

7) How long has APS estimated meters using the estimation methodology contained in the application?

Please provide a response to these questions within 30 days. Should you have any questions or concerns regarding this matter, please contact me at (602)542-0824.

Sincerely,

Steve Irvine  
Public Utilities Analyst II

**COMMISSIONERS**  
MARC SPITZER - Chairman  
WILLIAM A. MUNDELL  
JEFF HATCH-MILLER  
MIKE GLEASON  
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BRIAN C. MCNEIL  
Executive Secretary

**ARIZONA CORPORATION COMMISSION**

September 3, 2004

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Via First-Class Mail

Re: Staff's **First** Set of Data Requests to Arizona Public Service Company  
Billing Estimation and Meter Reading Inquiry

Dear Mr. Mumaw:

Please treat this as Staff's **first** set of data requests to Arizona Public Service Company in the above-referenced matter.

For purposes of this data request set, the words "APS," "you," and "your" refer to Arizona Public Service Company, and any representative, including every person and/or entity acting with, under the control of, or on behalf of Arizona Public Service Company. For each answer, please identify by name, title, and address each person providing information that forms the basis for the response provided.

These data requests are continuing, and your answers or any documents supplied in response to these data requests should be supplemented with any additional information or documents that come to your attention after you have provided your initial responses.

Please respond within **ten** calendar days of your receipt of this letter. **Please provide one hard copy of the requested data directly to each of the following addresses.**

- (1) Steve Irvine, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (2) Janet Wagner, Attorney, Arizona Corporation Commission, 1200 West

Sincerely,

A handwritten signature in cursive script, appearing to read "JW", is written over the typed name Janet Wagner.

Janet Wagner  
Attorney, Legal Division  
(602) 542-3402

JFW:vk  
Attachment  
cc: Steve Irvine  
Jana Van Ness [[Jana.VanNess@aps.com](mailto:Jana.VanNess@aps.com)]

**Arizona Public Service Company**  
**Billing Estimation and Meter Reading Inquiry**  
**September 3, 2004**

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Staff is sending the following documents with this request: 1) a copy of the electric utility rules that were in place before the electric competition rule amendments were adopted and 2) a copy of a PSWG document presenting utility procedures for bill estimation.

**Staff 1-1** For rate schedules that contain both demand and energy components, are there situations where the company estimates demand but obtains an actual read for energy or estimates energy but obtains an actual read for demand? If so, what causes this to occur (equipment failure, meter read error, etc.)?

**Staff 1-2** Please provide in Excel format the total number of customer bills estimated each year from 1995 to the present. Please break down these totals into the following categories:

- a) Number of estimations per month. For each month, please indicate the total number of estimations for that month.
- b) In addition, for each month, indicate the number of estimations by rate schedule. For each rate schedule, indicate the number of estimations that were demand only, energy only, or both demand and energy.
- c) For each month and rate schedule identified in response to part (b), indicate the number of estimations that fall into the following categories. In addition, for each of the following categories, indicate by month and rate schedule the number of estimations that were demand only, energy only, or both demand and energy
  - i) Number of estimations that occurred due to extreme weather conditions that prevented an actual meter read
  - ii) Number of estimations that occurred due to emergencies that prevented an actual meter read
  - iii) Number of estimations that occurred due to work stoppages that prevented an actual meter read

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- iv) Number of estimations that occurred because the customer generally reads his own meter but failed to deliver his meter reading to APS
- v) Number of estimations that occurred due to APS' inability to obtain access to the customer's premises
- vi) Number of estimations that occurred due to locked gates
- vii) Number of estimations that occurred due to blocked meters
- viii) Number of estimations that occurred due to vicious or dangerous animals
- ix) Number of estimations that occurred due to customer equipment failure
- x) Number of estimations that occurred to facilitate timely billing for customers using load profiles
- xi) Number of estimations that occurred due to reasons other than those listed in parts (i) through (x) of this data request. Your response should describe the specific nature of these other categories and should indicate the number of estimations for each.

**Staff 1-3** Please provide in Excel format the total number of bills by month since 1995.

**Staff 1-4** If the number of estimates provided in Staff-1 vary by time of year or other factors, please generally describe the circumstances that produce these variations or general trends.

**Staff 1-5** Please provide copies of all APS bill estimation procedures (demand, energy, and time-of-use) that have been in effect since 1995. For each procedure provided, please indicate the time period to which it applied. Were any changes to estimation procedures implemented as a result of a change to the billing system referenced in question Staff 1-21?

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- Staff 1-6** Please describe the ways in which APS bill estimation procedures for demand and energy have changed since 1995. Please identify and explain any changes to general assumptions such as load factor data that affect the way in which bills are estimated.
- Staff 1-7** For the estimation of demand, please identify the method in which rate class average load profiles are calculated. Are they based on customer averages for the individual rate schedules or averages for the cost of service class? Please identify the assumptions that the load factors would be based on for a customer on each of the following rates: E-32 (under 100 kW and over 1000 kW), E-34, and ECT-1R.
- Staff 1-8** When customer billing data is available to calculate a load factor, why is it not used in estimating demand?
- Staff 1-9** Please explain how using class data to estimate kW complies with rule 210.A.2. Your answer should address rule 210.A.2 both before and after the electric competition rule amendments.
- Staff 1-10** Please provide the company's most recent load research data and identify the average load factor by rate schedule and customer class.
- Staff 1-11** Assuming the meter reader is unable to get a read and estimates demand, how is the charge for the estimated demand "corrected" after a read is obtained (refer to PSWG, Version 5 of "Estimation Procedures" section 2.a.)? What factors are considered in determining what the billed demand should have been for the period that the demand was estimated?
- Staff 1-12** For the estimation of time-of-use, please identify the method by which rate class seasonal average on and off-peak demand and energy percentages are calculated. Are they based on customer averages for the individual rate schedules or averages for the cost of service class? Please identify the assumptions that the demand and energy percentages would be based on for a customer on each of the following rates: E-23 and ECT-1R.



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For instance, for an individual customer on E-23, and ECT-1R, what assumptions would the demand and energy percentages be based on?

- Staff 1-13** Referring to 210 (A) (4), after a third consecutive month of estimation due to lack of meter access, what is APS policy in regards to attempting to secure an accurate reading of the meter? Please describe how many attempts are made to secure an accurate meter read, and the methods used by the meter reader in the field and the billing agent.
- Staff 1-14** Referring to 210 (A) (3) (c), what alternatives does APS undertake in order to obtain a customer reading of the meter?
- Staff 1-15** When customer billing data is available to calculate customer specific on and off-peak energy use, why is it not used when estimating time-of-use bills?
- Staff 1-16** Please provide copies of internal reports or analyses, whether formal or informal of the company's billing or estimation procedures produced in the last ten years.
- Staff 1-17** Does APS have computer software that estimates bills? If yes, please identify the software that is used.
- Staff 1-18** What factors determine whether an estimated bill will be generated by the billing system or generated manually by an APS employee?
- Staff 1-19** Please describe the job titles and duties of employees who are tasked with manually generating an estimated bill. What types of qualifications and work history are required in the staffing of these employees?

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- Staff 1-20** For employees that manually estimate bills, how many do they estimate on an average daily basis? Are there any time limitations which restrict the time available to generate data and consider the usage data needed to produce an estimated bill?
- Staff 1-21** How many times has APS' billing system been changed significantly since 1995? Please identify the nature of the changes and the time period in which they occurred. Why were each of these changes implemented?
- Staff 1-22** Please identify the vendor and manufacturer of your billing system software and the name of the software package. Please identify APS' point of contact for that vendor and manufacturer and provide his/her contact information.
- Staff 1-23** Does APS have CIS personnel that have the ability to make programming changes to its billing software? Does APS contract out for software changes? What types of changes require programming personnel external to the company? Are any programming services included as part of the original software purchase or contract? If so what are they?
- Staff 1-24** Please state whether each and every one of APS' estimated bills specifically states that it has been estimated pursuant to rule 210 (A) (6). Please provide a sample bill to demonstrate where such designation is shown.
- Staff 1-25** Please describe the billing cycle time periods that APS implements.
- Staff 1-26** Please provide a copy of general policies and procedures provided to meter readers.
- Staff 1-27** What criteria does APS consider in determining the number of meter readers required? If it exists, please identify a model or formula used in determining appropriate meter reader staffing levels.

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- Staff 1-28** Please identify the number of meter readers that APS has employed on an annual basis since 1995.
- Staff 1-29** Does APS establish target or a minimum number of meters to be read during any given timeframe? What is that target and what factors are considered in setting that target?
- Staff 1-30** Please identify the average number of hours that each meter reader works per day.
- Staff 1-31** Please identify the average number of meters that each meter reader is responsible for reading per day.
- Staff 1-32** Have there been any instances where the company has issued an estimated bill due to lack of meter access, and the company subsequently discovered that the meter was in fact accessible at the time of the attempted read?
- Staff 1-33** Referring to Avis Read's bills:
- a) Identify and provide a copy of each bill that was estimated since 1990. Also provide the bills from the month before and the month after each of these estimated bills.
  - b) For each estimated bill, provide a detailed explanation why it was estimated.
  - c) For each item identified in response to part b, identify the ACC regulation that permits the estimation. (Use both old rule<sup>1</sup> and most recent rule 210).

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<sup>1</sup> "old rule" refers to rule 210 as it existed before various amendments adopted by the electric competition rules.

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- d) Please list any bills that were estimated but that do not specifically fall within the parameters listed in either old rule 210(A)(5) or most recent rule 210(A)(3). For each such bill, please explain why it was estimated and identify the steps that APS took to contact Ms. Read to obtain a meter read.
- e) Please identify any instances in which Ms. Read's bill was estimated more than two consecutive months. For each such circumstance, please explain why the bill was estimated and identify the steps that APS took to contact Ms. Read to obtain a meter read.
- f) For each of Ms. Read's estimated bills, please provide a worksheet that describes the process and calculations by which the estimation was determined. Please include a narrative description of the process.
- g) Please indicate which of Ms. Read's bills were automatically estimated using billing software or manually estimated.

**Staff 1-34** Please explain why Ms. Read's bills were estimated for six consecutive months (August 1999-February 2000).

**Staff 1-35** Why were "actual" bills for November-December 1999 and December-January 1999 sent out after estimated bills were received by Ms. Read?

**Staff 1-36** Please state whether APS contends that Ms. Read reads her own meter and failed to deliver her "meter reading card" for purposes of old rule 210(A)(5)(a) or most recent rule 210(A)(3)(b).

**Staff 1-37** Please identify by specific date any "severe weather conditions" that prevented APS from reading Ms. Read's meter. For each specific date identified, please describe the particular "severe weather conditions" that occurred.

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**Staff 1-38** Please identify each circumstance, if any, in which APS failed to read Ms. Read's meter due to locked gates, blocked meters, or vicious or dangerous animals. For each such instance, please provide the date and specifically describe the applicable circumstances.

**Staff 1-39** About Paul and Linda Schaffer's bills:

- a) Identify and provide a copy of each bill that was estimated since 1990. Also provide the bills from the month before and the month after each of these estimated bills.
- b) For each estimated bill, provide a detailed explanation why it was estimated.
- c) For each item identified in response to part b, identify the ACC regulation that permits the estimation. (Use both old rule and most recent rule 210).
- d) Please list any bills that were estimated but that do not specifically fall within the parameters listed in either old rule 210(A)(5) or most recent rule 210(A)(3). For each such bill, please explain why it was estimated and identify the steps that APS took to contact the Schaffers to obtain a meter read.
- e) Please identify any instances in which the Schaffers' bill was estimated more than two consecutive months. For each such circumstance, please explain why the bill was estimated and identify the steps that APS took to contact the Schaffers to obtain a meter read.
- f) Please indicate which of Ms. Read's bills were automatically estimated using billing software or manually estimated.

**Staff 1-40** Please state whether APS contends that the Schaffers read their own meter and failed to deliver their "meter reading card" for purposes of old rule 210 (A)(5)(a) or most recent rule 210 (A)(3)(b).

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- Staff 1-41** Please identify by specific date any "severe weather conditions" that prevented APS from reading the Schaffers' meter. For each specific date identified, please describe the particular "severe weather conditions" that occurred.
- Staff 1-42** Please identify each circumstance, if any, in which APS failed to read the Schaffers' meter due to locked gates, blocked meters, or vicious or dangerous animals. For each such instance, please provide the date and specifically describe the applicable circumstances.
- Staff 1-43** In their lawsuit, Plaintiffs Avis Read and Paul and Linda Schaffer claimed that APS sent them estimated bills that were not designated as such.
- a) For each such claim, please provide the data and/or documentation to establish that the bill was not estimated or that the bill was in fact designated as an estimated bill.
  - b) If the Plaintiffs' allegations are correct, please explain why APS failed to indicate that the bills were estimated.
- Staff 1-44** Please describe APS' procedures for ensuring that every estimated bill is appropriately designated as such.
- Staff 1-45** In APS' Application for Declaratory Order and subsequent amendments, APS attached a copy of its bill estimation procedures. Please indicate how long these procedures have been in effect. If portions of them were included in an earlier version of APS bill estimation procedures, please indicate the dates for each such portion and describe the nature and reasons for any change.
- Staff 1-46** Please provide a copy of all documents, including pleadings, discovery, correspondence, e-mails, court orders, or any other matters, in APS' or APS' attorney's possession related to the Read v. APS Superior Court case.

**R14-2-104. Inspection of annual reports**

Pursuant to A.R.S. § 40-204(C), all utility annual reports and attachments thereto required to be filed pursuant to this Chapter shall be open to public inspection without further or special order of the Arizona Corporation Commission.

**Historical Note**

Former Section R14-2-104 repealed, new Section R14-2-104 adopted effective March 2, 1982 (Supp. 82-2).

**R14-2-105. Notice of rate hearings**

- A. Every public service corporation shall give notice to customers affected of any hearing at which the fair value of that corporation's property is to be determined and just and reasonable rates and charges are to be established.
- B. The form and manner of such notice shall be as the Commission may direct by procedural order.

**Historical Note**

Adopted effective March 2, 1982 (Supp. 82-2).

*Editor's Note: The following Section was amended under an exemption from the Attorney General certification provisions of the Arizona Administrative Procedure Act (See State of Arizona v. Arizona Corporation Commission, 114 Ariz. Adv. Rep. 36 (Cl. App. 1992), as determined by the Corporation Commission. This exemption means that the rules as amended were not certified by the Attorney General.*

**R14-2-106. Commission Color Code to Identify Location of Underground Facilities**

- A. If the location of an underground facility is marked with stakes, paint, or in some customary manner pursuant to A.R.S. § 40-360.21(13), the facility owner will use the following color code::

Facility Type	Specific Color
Electric Power Distribution and Transmission.	Safety Red.
Gas Distribution and Transmission; Oil Product Distribution and Transmission; Dangerous Materials, Product Lines.	High Visibility Safety Yellow.
Telephone and Telegraph System; Cable Television.	Safety Alert Orange.
Fiber Optics Communication Lines.	The Letter "F" in Safety Alert Orange.
Water Systems; Slurry Pipelines.	Safety Precaution Blue.
Sanitary Sewer Systems.	Safety Green.
<b>UNACCEPTABLE FACILITY LOCATION COLORS:</b>	
Fluorescent Pink - This shall be considered a land surveyor marking.	
White - This shall be reserved for excavator markings.	

- B. Excavators and Underground Facility Owners shall consider use of the color fluorescent pink to be indicative of land survey markings and not location markings for any underground facility. Surveyors may place aerial photogrammetric markings (targets) using the color white; such marking shall have a fluorescent pink dot not less than 2 inches in diameter placed within 1 foot of any edge of the aerial marking. Fluorescent pink shall not be used by excavators or Underground Facility Owners.
- C. Excavators making markings pursuant to A.R.S. § 40-360.22(C) are required to use the color white.
- D. Colors similar to those listed in R14-2-106(A) through R14-2-106(C) shall not be used for other than their listed purpose.

**Historical Note**

Adopted effective September 5, 1986 (Supp. 86-5).  
Amended effective June 4, 1993, under an exemption from the Attorney General certification requirements of the Arizona Administrative Procedure Act (Supp. 93-2).  
Amended effective August 16, 1996 (Supp. 96-3).

**ARTICLE 2. ELECTRIC UTILITIES****R14-2-201. Definitions**

In this Article, unless the context otherwise requires, the following definitions shall apply.

1. "Advance in aid of construction". Funds provided to the utility by the applicant under the terms of a line extension agreement the value of which may be refundable.
2. "Applicant". A person requesting the utility to supply electric service.

3. "Application". A request to the utility for electric service, as distinguished from an inquiry as to the availability or charges for such service.
4. "Arizona Corporation Commission". The regulatory authority of the state of Arizona having jurisdiction over public service corporations operating in Arizona.
5. "Billing month". The period between any two regular readings of the utility's meters at approximately 30 day intervals.
6. "Billing period". The time interval between two consecutive meter readings that are taken for billing purposes.
7. "Contributions in aid of construction". Funds provided to the utility by the applicant under the terms of a line extension agreement and/or service connection tariff the value of which is not refundable.
8. "Curtailed priority". The order in which electric service is to be curtailed to various classifications of customers, as set forth in the utility's filed tariffs.
9. "Customer". The person or entity in whose name service is rendered, as evidenced by the signature on the application or contract for that service, or by the receipt and/or payment of bills regularly issued in his name regardless of the identity of the actual user of the service.
10. "Customer charge". The amount the customers must pay the utility for the availability of electric service, excluding any electricity used, as specified in the utility's tariffs.
11. "Day". Calendar day.
12. "Demand". The rate at which power is delivered during any specified period of time. Demand may be expressed in kilowatts, kilovolt-amperes, or other suitable units.

13. "Distribution lines". The utility lines operated at distribution voltage which are constructed along public roadways or other bona fide rights-of-way, including easements on customer's property.
14. "Elderly". A person who is 62 years of age or older.
15. "Energy". Electric energy, expressed in kilowatt-hours.
16. "Handicapped". A person with a physical or mental condition which substantially contributes to the person's inability to manage his or her own resources, carry out activities of daily living, or protect oneself from neglect or hazardous situations without assistance from others.
17. "Illness". A medical ailment or sickness for which a residential customer obtains a verified document from a licensed medical physician stating the nature of the illness and that discontinuance of service would be especially dangerous to the customer's health.
18. "Inability to pay". Circumstances where a residential customer:
  - a. Is not gainfully employed and unable to pay, or
  - b. Qualifies for government welfare assistance, but has not begun to receive assistance on the date that he receives his bill and can obtain verification of that fact from the government welfare assistance agency.
  - c. Has an annual income below the published federal poverty level and can produce evidence of this, and
  - d. Signs a declaration verifying that the customer meets one of the above criteria and is either elderly, handicapped, or suffers from illness.
19. "Interruptible electric service". Electric service that is subject to interruption as specified in the utility's tariff.
20. "Kilowatt (kw)". A unit of power equal to 1,000 watts.
21. "Kilowatt-hour (kwh)". Electric energy equivalent to the amount of electric energy delivered in one hour when delivery is at a constant rate of one kilowatt.
22. "Line extension". The lines and equipment necessary to extend the electric distribution system of the utility to provide service to additional customers.
23. "Master meter". A meter for measuring or recording the flow of electricity that has passed through it at a single location where said electricity is distributed to tenants or occupants for their individual usage.
24. "Megawatt (Mw)". A unit of power equal to 1,000,000 watts.
25. "Meter". The instrument for measuring and indicating or recording the flow of electricity that has passed through it.
26. "Meter tampering". A situation where a meter has been illegally altered. Common examples are meter bypassing, use of magnets to slow the meter recording, and broken meter seals.
27. "Minimum charge". The amount the customer must pay for the availability of electric service, including an amount of usage, as specified in the utility's tariffs.
28. "Permanent customer". A customer who is a tenant or owner of a service location who applies for and receives permanent electric service.
29. "Permanent service". Service which, in the opinion of the utility, is of a permanent and established character. The use of electricity may be continuous, intermittent, or seasonal in nature.
30. "Person". Any individual, partnership, corporation, governmental agency, or other organization operating as a single entity.
31. "Point of delivery". The point where facilities owned, leased, or under license by a customer connects to the utility's facilities.
32. "Power". The rate of generating, transferring and/or using electric energy, usually expressed in kilowatts.
33. "Premises". All of the real property and apparatus employed in a single enterprise on an integral parcel of land undivided by public streets, alleys or railways.
34. "Residential subdivision development". Any tract of land which has been divided into four or more contiguous lots with an average size of one acre or less for use for the construction of residential buildings or permanent mobile homes for either single or multiple occupancy.
35. "Residential use". Service to customers using electricity for domestic purposes such as space heating, air conditioning, water heating, cooking, clothes drying, and other residential uses and includes use in apartment buildings, mobile home parks, and other multiunit residential buildings.
36. "Service area". The territory in which the utility has been granted a Certificate of Convenience and Necessity and is authorized by the Commission to provide electric service.
37. "Service establishment charge". The charge as specified in the utility's tariffs which covers the cost of establishing a new account.
38. "Service line". The line extending from a distribution line or transformer to the customer's premises or point of delivery.
39. "Service reconnect charge". The charge as specified in the utility's tariffs which must be paid by the customer prior to reestablishment of electric service each time the electricity is disconnected for nonpayment or whenever service is discontinued for failure otherwise to comply with the utility's tariffs.
40. "Service reestablishment charge". A charge as specified in the utility's tariffs for service at the same location where the same customer had ordered a service disconnection within the preceding 12-month period.
41. "Single family dwelling". A house, an apartment, a mobile home permanently affixed to a lot, or any other permanent residential unit which is used as a permanent home.
42. "Tariffs". The documents filed with the Commission which list the services and products offered by the utility and which set forth the terms and conditions and a schedule of the rates and charges, for those services and products.
43. "Temporary service". Service to premises or enterprises which are temporary in character, or where it is known in advance that the service will be of limited duration. Service which, in the opinion of the utility, is for operations of a speculative character is also considered temporary service.
44. "Third-party notification". A notice sent to an individual or a public entity willing to receive notification of the pending discontinuance of service of a customer of record in order to make arrangements on behalf of said customer satisfactory to the utility.
45. "Utility". The public service corporation providing electric service to the public in compliance with state law.
46. "Weather especially dangerous to health". That period of time commencing with the scheduled termination date when the local weather forecast, as predicted by the National Oceanographic and Administration Service, indicates that the temperature will not exceed 32 degrees Fahrenheit for the next day's forecast. The Commission may determine that other weather conditions are especially dangerous to health as the need arises.



## Historical Note

Adopted effective March 2, 1982 (Supp. 82-2).

## R14-2-202. Certificate of Convenience and Necessity for electric utilities; filing requirements on certain new plants

## A. Application for new Certificate of Convenience and Necessity

1. Six copies of each application for a new Certificate of Convenience and Necessity shall be submitted in a form prescribed by the Commission and shall include, at a minimum, the following information:
  - a. The proper name and correct address of the proposed utility company and its owner, if a sole proprietorship, each partner, if a partnership, or the President and Secretary if a corporation.
  - b. The rates proposed to be charged for the service that will be rendered.
  - c. A financial statement setting forth the financial condition of the applicant.
  - d. Maps of the proposed service area and/or a description of the area proposed to be served.
  - e. Appropriate city, county and/or state agency approvals, where appropriate.
  - f. The actual number of customers within the service area as of the time of filing and the estimated number of customers to be served for each of the first five years of operation.
  - g. Such other information as the Commission by order or the staff of the Utilities Division by written directive may request.

## B. Filing requirements on certain new plants

1. Any utility proposing to construct a generating facility of over eighty Mw capacity shall, at least 180 days prior to commencement of construction, file with the Commission the following information:
  - a. The proposed site of such plant.
  - b. The approximate generating capacity of such plant and the number of generating units proposed for each plant site.
  - c. The type of fuel proposed to be used in each plant.
  - d. The proposed source of fuel and water for each plant.
  - e. The estimated date by which such plant will be in operation.
  - f. The load forecasting data available to such utility which, in its opinion, justifies the need for construction of such proposed generating facility.
  - g. The method and timing of financing the proposed plant.
  - h. Such further information as the Commission may, by special order, or the staff of the Utilities Division may, by written directive, require.
2. The utility shall update the information required to be filed on not less than an annual basis by January 31 of each year following the original filing until construction has been completed.

## C. Application for discontinuance or abandonment of utility service

1. Any utility proposing to discontinue or abandon utility service currently in use by the public shall prior to such action obtain authority therefor from the Commission.
2. The utility shall include in the application, studies of past, present and prospective customer use of the subject service, plant or facility as is necessary to support the application.
3. An application shall not be required to remove individual facilities where a customer has requested service discontinuance.

## Historical Note

Adopted effective March 2, 1982 (Supp. 82-2).

## R14-2-203. Establishment of service

## A. Information from new applicants

1. A utility may obtain the following minimum information from each new applicant for service:
  - a. Name or names of applicant(s).
  - b. Service address or location and telephone number.
  - c. Billing address/telephone number, if different than service address.
  - d. Address where service was provided previously.
  - e. Date applicant will be ready for service.
  - f. Indication of whether premises have been supplied with utility service previously.
  - g. Purpose for which service is to be used.
  - h. Indication of whether applicant is owner or tenant of or agent for the premises.
  - i. Information concerning the energy and demand requirements of the customer.
  - j. Type and kind of life-support equipment, if any, used by the customer.
2. A utility may require a new applicant for service to appear at the utility's designated place of business to produce proof of identity and sign the utility's application form.
3. Where service is requested by two or more individuals the utility shall have the right to collect the full amount owed to the utility from any one of the applicants.

## B. Deposits

1. A utility shall not require a deposit from a new applicant for residential service if the applicant is able to meet any of the following requirements:
  - a. The applicant has had service of a comparable nature with the utility at another service location within the past two years and was not delinquent in payment more than twice during the last 12 consecutive months or disconnected for nonpayment.
  - b. The applicant can produce a letter regarding credit or verification from an electric utility where service of a comparable nature was last received which states applicant had a timely payment history at time of service discontinuance.
  - c. In lieu of a deposit, a new applicant may provide a Letter of Guarantee from an existing customer with service and acceptable to the utility or a surety bond as security for the utility.
2. The utility shall issue a nonnegotiable receipt to the applicant for the deposit. The inability of the customer to produce such a receipt shall in no way impair his right to receive a refund of the deposit which is reflected on the utility's records.
3. Deposits shall be interest bearing; the interest rate and method of calculation shall be filed with and approved by the Commission in a tariff proceeding.
4. Each utility shall file a deposit refund procedure with the Commission, subject to Commission review and approval during a tariff proceeding. However, each utility's refund policy shall include provisions for residential deposits and accrued interest to be refunded or letters of guarantee or surety bonds to expire after 12 months of service if the customer has not been delinquent more than twice in the payment of utility bills.
5. A utility may require a residential customer to establish or reestablish a deposit if the customer becomes delinquent in the payment of three or more bills within a 12

- consecutive month period or has been disconnected for service during the last 12 months.
6. The amount of a deposit required by the utility shall be determined according to the following terms:
    - a. Residential customer deposits shall not exceed two times that customer's estimated average monthly bill.
    - b. Nonresidential customer deposits shall not exceed two and one-half times that customer's estimated maximum monthly bill.
  7. The utility may review the customer's usage after service has been connected and adjust the deposit amount based upon the customer's actual usage.
  8. A separate deposit may be required for each meter installed.
- C. Grounds for refusal of service
1. A utility may refuse to establish service if any of the following conditions exist:
    - a. The applicant has an outstanding amount due for the same class of utility service with the utility, and the applicant is unwilling to make arrangements with the utility for payment.
    - b. A condition exists which in the utility's judgment is unsafe or hazardous to the applicant, the general population, or the utility's personnel or facilities.
    - c. Refusal by the applicant to provide the utility with a deposit when the customer has failed to meet the credit criteria for waiver of deposit requirements.
    - d. Customer is known to be in violation of the utility's tariffs filed with the Commission.
    - e. Failure of the customer to furnish such funds, service, equipment, and/or rights-of-way necessary to serve the customer and which have been specified by the utility as a condition for providing service.
    - f. Applicant falsifies his or her identity for the purpose of obtaining service.
- D. Service establishments, re-establishments or reconnection charge
1. Each utility may make a charge as approved by the Commission for the establishment, reestablishment, or reconnection of utility services.
  2. Should service be established during a period other than regular working hours at the customer's request, the customer may be required to pay an after-hour charge for the service connection. Where the utility scheduling will not permit service establishment on the same day requested, the customer can elect to pay the after-hour charge for establishment that day or his service will be established on the next available normal working day.
  3. For the purpose of this rule, the definition of service establishments are where the customer's facilities are ready and acceptable to the utility and the utility needs only to install a meter, read a meter, or turn the service on.
- E. Temporary service
1. Applicants for temporary service may be required to pay the utility, in advance of service establishment, the estimated cost of installing and removing the facilities necessary for furnishing the desired service.
  2. Where the duration of service is to be less than one month, the applicant may also be required to advance a sum of money equal to the estimated bill for service.
  3. Where the duration of service is to exceed one month, the applicant may also be required to meet the deposit requirements of the utility.

4. If at any time during the term of the agreement for services the character of a temporary customer's operations changes so that in the opinion of the utility the customer is classified as permanent, the terms of the utility's line extension rules shall apply.

Historical Note

Adopted effective March 2, 1982 (Supp. 82-2).

R14-2-204. Minimum customer information requirements

- A. Information for residential customers
1. A utility shall make available upon customer request not later than 60 days from the date of request a concise summary of the rate schedule applied for by such customer. The summary shall include the following:
    - a. The monthly minimum or customer charge, identifying the amount of the charge and the specific amount of usage included in the minimum charge, where applicable.
    - b. Rate blocks, where applicable.
    - c. Any adjustment factor(s) and method of calculation.
  2. The utility shall to the extent practical identify the tariff most advantageous to the customer and notify the customer of such prior to service commencement.
  3. In addition, a utility shall make available upon customer request, not later than 60 days from date of service commencement, a concise summary of the utility's tariffs or the Commission's rules and regulations concerning:
    - a. Deposits
    - b. Termination of service
    - c. Billing and collection
    - d. Complaint handling.
  4. Each utility upon request of a customer shall transmit a written statement of actual consumption by such customer for each billing period during the prior 12 months unless such data is not reasonably ascertainable.
  5. Each utility shall inform all new customers of their right to obtain the information specified above.
- B. Information required due to changes in tariffs
1. Each utility shall transmit to affected customers a concise summary of any change in the utility's tariffs affecting those customers.
  2. This information shall be transmitted to the affected customer within 60 days of the effective date of the change.

Historical Note

Adopted effective March 2, 1982 (Supp. 82-2).

R14-2-205. Master metering

- A. Mobile home parks - new construction/expansion
1. A utility shall refuse service to all new construction and/or expansion of existing permanent residential mobile home parks unless the construction and/or expansion is individually metered by the utility. Line extensions and service connections to serve such expansion shall be governed by the line extension and service connection tariff of the appropriate utility.
  2. Permanent residential mobile home parks for the purpose of this rule shall mean mobile home parks where, in the opinion of the utility, the average length of stay for an occupant is a minimum of six months.
  3. For the purpose of this rule, expansion means the acquisition of additional real property for permanent residential spaces in excess of that existing at the effective date of this rule.
- B. Residential apartment complexes, condominiums, and other multiunit residential buildings

1. Master metering shall not be allowed for new construction of apartment complexes and condominiums unless the building(s) will be served by a centralized heating, ventilation and/or air conditioning system and the contractor can provide to the utility an analysis demonstrating that the central unit will result in a favorable cost/benefit relationship.
2. At a minimum, the cost/benefit analysis should consider the following elements for a central unit as compared to individual units:
  - a. Equipment and labor costs
  - b. Financing costs
  - c. Maintenance costs
  - d. Estimated kwh usage
  - e. Estimated kw demand on a coincident demand and noncoincident demand basis (for individual units)
  - f. Cost of meters and installation
  - g. Customer accounting cost (one account vs. several accounts).

#### Historical Note

Adopted effective March 2, 1982 (Supp. 82-2).

#### R14-2-206. Service Lines and Establishments

##### A. Priority and timing of service establishments

1. After an applicant has complied with the utility's application and deposit requirements and has been accepted for service by the utility, the utility shall schedule that customer for service establishment.
2. Service establishments shall be scheduled for completion within five working days of the date the customer has been accepted for service, except in those instances when the customer requests service establishment beyond the five working day limitation.
3. When a utility has made arrangements to meet with a customer for service establishment purposes and the utility or the customer cannot make the appointment during the prearranged time, the utility shall reschedule the service establishment to the satisfaction of both parties.
4. A utility shall schedule service establishment appointments within a maximum range of four hours during normal working hours, unless another time frame is mutually acceptable to the utility and the customer.
5. Service establishments shall be made only by qualified utility service personnel.
6. For the purposes of this rule, service establishments are where the customer's facilities are ready and acceptable to the utility and the utility needs only to install or read a meter or turn the service on.

##### B. Service lines

1. Customer provided facilities
  - a. Each applicant for services shall be responsible for all inside wiring including the service entrance and meter socket.
  - b. Meters and service switches in conjunction with the meter shall be installed in a location where the meters will be readily and safely accessible for reading, testing and inspection and where such activities will cause the least interference and inconvenience to the customer. However, the meter locations shall not be on the front exterior wall of the home; or in the carport or garage, unless mutually agreed to between the home builder or customer and the utility. The customer shall provide, without cost to the utility, at a suitable and easily accessible location, sufficient and proper space for installation of meters.

- c. Where the meter or service line location on the customer's premises is changed at the request of the customer or due to alterations on the customer's premises, the customer shall provide and have installed at his expense all wiring and equipment necessary for relocating the meter and service line connection and the utility may make a charge for moving the meter and/or service line.

##### 2. Company provided facilities

- a. Each utility shall file for Commission approval, a service line tariff which defines the maximum footage and/or equipment allowance to be provided by the utility at no charge. The maximum footage and/or equipment allowance may be differentiated by customer class.
- b. The cost of any service line in excess of that allowed at no charge shall be paid for by the customer as a contribution in aid of construction.
- c. A customer requesting an underground service line in an area served by overhead facilities shall pay for the difference between an overhead service connection and the actual cost of the underground connection as a nonrefundable contribution.

##### C. Easements and rights-of-way

1. Each customer shall grant adequate easement and right-of-way satisfactory to the utility to ensure that customer's proper service connection. Failure on the part of the customer to grant adequate easement and right-of-way shall be grounds for the utility to refuse service.
2. When a utility discovers that a customer or his agent is performing work or has constructed facilities adjacent to or within an easement or right-of-way and such work, construction or facility poses a hazard or is in violation of federal, state or local laws, ordinances, statutes, rules or regulations, or significantly interferes with the utility's access to equipment, the utility shall notify the customer or his agent and shall take whatever actions are necessary to eliminate the hazard, obstruction or violation at the customer's expense.

#### Historical Note

Adopted effective March 2, 1982 (Supp. 82-2).

*Editor's Note: The following Section was amended under an exemption from the Attorney General certification provisions of the Arizona Administrative Procedure Act (See State of Arizona v. Arizona Corporation Commission, 114 Ariz. Adv. Rep. 36 (Cl. App. 1992), as determined by the Corporation Commission. This exemption means that the rules as amended were not certified by the Attorney General.*

#### R14-2-207. Line Extensions

##### A. General requirements

1. Each utility shall file for Commission approval a line extension tariff which incorporates the provisions of this rule and specifically defines the conditions governing line extensions.
2. Upon request by an applicant for a line extension, the utility shall prepare, without charge, a preliminary sketch and rough estimate of the cost of installation to be paid by said applicant.
3. Any applicant for a line extension requesting the utility to prepare detailed plans, specifications, or cost estimates may be required to deposit with the utility an amount equal to the estimated cost of preparation. The utility shall, upon request, make available within 90 days after receipt of the deposit referred to above, such plans, speci-

- fications, or cost estimates of the proposed line extension. Where the applicant authorizes the utility to proceed with construction of the extension, the deposit shall be credited to the cost of construction; otherwise the deposit shall be nonrefundable. If the extension is to include oversizing of facilities to be done at the utility's expense, appropriate details shall be set forth in the plans, specifications and cost estimates. Subdivisions providing the utility with approved plats shall be provided with plans, specifications, or cost estimates within 45 days after receipt of the deposit referred to above.
4. Where the utility requires an applicant to advance funds for a line extension, the utility shall furnish the applicant with a copy of the line extension tariff of the appropriate utility prior to the applicant's acceptance of the utility's extension agreement.
  5. All line extension agreements requiring payment by the applicant shall be in writing and signed by each party.
  6. The provisions of this rule apply only to those applicants who in the utility's judgment will be permanent customers of the utility. Applications for temporary service shall be governed by the Commission's rules concerning temporary service applications.
- B. Minimum written agreement requirements
1. Each line extension agreement shall, at a minimum, include the following information:
    - a. Name and address of applicant(s)
    - b. Proposed service address or location
    - c. Description of requested service
    - d. Description and sketch of the requested line extension
    - e. A cost estimate to include materials, labor, and other costs as necessary
    - f. Payment terms
    - g. A concise explanation of any refunding provisions, if applicable
    - h. The utility's estimated start date and completion date for construction of the line extension
    - i. A summary of the results of the economic feasibility analysis performed by the utility to determine the amount of advance required from the applicant for the proposed line extension.
  2. Each applicant shall be provided with a copy of the written line extension agreement.
- C. Line extension requirements
1. Each line extension tariff shall include the following provisions:
    - a. A maximum footage and/or equipment allowance to be provided by the utility at no charge. The maximum footage and/or equipment allowance may be differentiated by customer class.
    - b. An economic feasibility analysis for those extensions which exceed the maximum footage and/or equipment allowance. Such economic feasibility analysis shall consider the incremental revenues and costs associated with the line extension. In those instances where the requested line extension does not meet the economic feasibility criteria established by the utility, the utility may require the customer to provide funds to the utility, which will make the line extension economically feasible. The methodology employed by the utility in determining economic feasibility shall be applied uniformly and consistently to each applicant requiring a line extension.
    - c. The timing and methodology by which the utility will refund any advances in aid of construction as additional customers are served off the line extension. The customer may request an annual survey to determine if additional customers have been connected to and are using service from the extension. In no case shall the amount of the refund exceed the amount originally advanced.
  - d. All advances in aid of construction shall be noninterest bearing.
  - e. If after five years from the utility's receipt of the advance, the advance has not been totally refunded, the advance shall be considered a contribution in aid of construction and shall no longer be refundable.
- D. Residential subdivision development and permanent mobile home parks
1. Each utility shall submit as a part of its line extension tariff separate provisions for residential subdivision developments and permanent mobile home parks.
- E. Single phase underground extensions in subdivision developments
1. Extensions of single phase electric lines necessary to furnish permanent electric service to new residential buildings or mobile homes within a subdivision, in which facilities for electric service have not been constructed, for which applications are made by a developer shall be installed underground in accordance with the provisions set forth in this regulation except where it is not feasible from an engineering, operational, or economic standpoint.
  2. Rights-of-way easements
    - a. The utility shall construct or cause to be constructed and shall own, operate and maintain all underground electric distribution and service lines along public streets, roads and highways and on public lands and private property which the utility has the legal right to occupy.
    - b. Rights-of-way and easements suitable to the utility must be furnished by the developer at no cost to the utility and in reasonable time to meet service requirements. No underground electric facilities shall be installed by a utility until the final grades have been established and furnished to the utility. In addition, the easement strips, alleys and streets must be graded to within six inches of final grade by the developer before the utility will commence construction. Such clearance and grading must be maintained by the developer during construction by the utility.
    - c. If, subsequent to construction, the clearance or grade is changed in such a way as to require relocation of the underground facilities or results in damage to such facilities, the cost of such relocation and/or resulting repairs shall be borne by the developer.
  3. Installation of single phase underground electric lines within a subdivision
    - a. The developer shall provide the trenching, backfill (including any imported backfill required), compaction, repaving, and any earthwork for pull boxes and transformer pad sites required to install the underground electric system all in accordance with the specifications and schedules of the utility.
    - b. Each utility shall inspect the trenching provided by the developer within 24 hours after a mutually agreed upon trench opening date, and allow for phased inspection of trenching as mutually agreed upon by the developer and utility. In all cases, the utility shall make every effort to expedite the inspection.

- tion of developer provided trenching. The utility shall assume responsibility for the trench within three working days after the utility has inspected and approved the trenching.
- c. The utility shall install or cause to be installed underground electric lines and related equipment in accordance with the applicable provisions of the 1993 edition (and no future editions) of ANSI C2 (National Electrical Safety Code) with sufficient capacity and suitable materials which shall assure adequate and reasonable electric service in the foreseeable future. ANSI C2 is incorporated by reference, and on file with the Office of the Secretary of State. Copies are available from the Institute of Electrical and Electronic Engineers, Inc., 345 East 47th Street, New York, New York 10017.
  - d. Underground service lines from underground residential distribution systems shall be owned, operated and maintained by the utility, and shall be installed pursuant to its effective underground line extension and service connection tariffs on file with the Commission.
4. Special conditions
    - a. When the application of any of the provisions of R14-2-207(E) appears to either party not to be feasible from an engineering, operational or economic standpoint, the utility or the developer may refer the matter to the Commission for a determination as to whether an exception to the underground policy expressed within the provisions of this regulation is warranted. Interested third parties may present their views to the Commission in conjunction with such referrals.
    - b. Notwithstanding any provision of this regulation to the contrary, no utility shall construct overhead single phase electric lines in any new subdivision to which this regulation is applicable and which is contiguous to another subdivision in which electric service is furnished underground without the approval of the Commission.
    - c. Underground service lines installed pursuant to this rule (R14-2-207(E)) and accepted by the utility shall not be replaced with an overhead distribution pole line except upon a verified application of the utility, as stated in R14-2-207(E)(4)(a).
  5. Nonapplicability
    - a. Any underground electric distribution system requiring more than single phase service is not covered by this regulation and shall be constructed pursuant to the effective line extension rules and regulations or policies of the affected utility on file with the Commission.
    - b. If there is an existing distribution pole line(s) on or across a recorded subdivision at the time of the application for electrical service for the subdivision and the line will be utilized in the subdivision. (This would not apply if the pole line were serving a building or groups of buildings or any other type of service which would be removed before construction is finished.)
    - c. A distribution pole line that parallels a boundary of a subdivision and this line can serve lots within the subdivision.
    - d. Subdivisions recorded prior to the effective date of this rule shall be governed by the terms and conditions of R14-2-207(E).

#### F. Ownership of facilities

1. Any facilities installed hereunder shall be the sole property of the utility.

#### Historical Note

Adopted effective March 2, 1982 (Supp. 82-2). Amended subsection (E)(3)(c) effective April 1, 1986 (Supp. 86-2).

Amended effective August 6, 1991 (Supp. 91-3).

Amended effective August 16, 1996 (Supp. 96-3).

*Editor's Note: The following Section was amended under an exemption from the Attorney General certification provisions of the Arizona Administrative Procedure Act (See State of Arizona v. Arizona Corporation Commission, 114 Ariz. Adv. Rep. 36 (Cl. App. 1992), as determined by the Corporation Commission. This exemption means that the rules as amended were not certified by the Attorney General.*

#### R14-2-208. Provision of Service

##### A. Utility responsibility

1. Each utility shall be responsible for the safe transmission and distribution of electricity until it passes the point of delivery to the customer.
2. Each utility shall be responsible for maintaining in safe operating condition all meters, equipment and fixtures installed on the customer's premises by the utility for the purposes of delivering utility service to the customer.
3. The utility may, at its option, refuse service until the customer has obtained all required permits and/or inspections indicating that the customer's facilities comply with local construction and safety standards.

##### B. Customer responsibility

1. Each customer shall be responsible for maintaining all customer facilities on the customer's side of the point of delivery in safe operating condition.
2. Each customer shall be responsible for safeguarding all utility property installed in or on the customer's premises for the purpose of supplying utility service to that customer.
3. Each customer shall exercise all reasonable care to prevent loss or damage to utility property, excluding ordinary wear and tear. The customer shall be responsible for loss of or damage to utility property on the customer's premises arising from neglect, carelessness, or misuse and shall reimburse the utility for the cost of necessary repairs or replacements.
4. Each customer shall be responsible for payment for any equipment damage and/or estimated unmetered usage resulting from unauthorized breaking of seals, interfering, tampering or bypassing the utility meter.
5. Each customer shall be responsible for notifying the utility of any equipment failure identified in the utility's equipment.

##### C. Continuity of service

1. Each utility shall make reasonable efforts to supply a satisfactory and continuous level of service. However, no utility shall be responsible for any damage or claim of damage attributable to any interruption or discontinuation of service resulting from:
  - a. Any cause against which the utility could not have reasonably foreseen or made provision for, i.e., force majeure.
  - b. Intentional service interruptions to make repairs or perform routine maintenance.
  - c. Curtailment.

##### D. Service interruptions

the 1989 edition (and no future editions) of ANSI C84.1 (American National Standard for Electric Power Systems and Equipment-Voltage Ratings [60Hz]), incorporated by reference and on file with the Office of the Secretary of State. Copies are available from the American National Standards Institute, 1430 Broadway, New York, New York 10018.

#### Historical Note

Adopted effective March 2, 1982 (Supp. 82-2). Amended subsections (D)(5) and (F)(1) and (2) effective April 1, 1986 (Supp. 86-2). Amended effective February 8, 1991 (Supp. 91-1). Amended effective August 16, 1996 (Supp. 96-3).

*Editor's Note: The following Section was amended under an exemption from the Attorney General certification provisions of the Arizona Administrative Procedure Act (See State of Arizona v. Arizona Corporation Commission, 114 Ariz. Adv. Rep. 36 (Cl. App. 1992), as determined by the Corporation Commission. This exemption means that the rules as amended were not certified by the Attorney General.*

#### R14-2-209. Meter Reading

##### A. Company or customer meter reading

1. Each utility may at its discretion allow for customer reading of meters.
2. It shall be the responsibility of the utility to inform the customer how to properly read his or her meter.
3. Where a customer reads his or her own meter, the utility will read the customer's meter at least once every six months.
4. The utility shall provide the customer with postage-paid cards or other methods to report the monthly reading to the utility.
5. Each utility shall specify the timing requirements for the customer to submit his or her monthly meter reading to conform with the utility's billing cycle.
6. In the event the customer fails to submit the reading on time, the utility may issue the customer an estimated bill.
7. Meters shall be read monthly on as close to the same day as practical.

##### B. Measuring of service

1. All energy sold to customers and all energy consumed by the utility, except that sold according to fixed charge schedules, shall be measured by commercially acceptable measuring devices owned and maintained by the utility, except where it is impractical to install meters, such as street lighting or security lighting, or where otherwise authorized by the Commission.
2. When there is more than one meter at a location, the metering equipment shall be so tagged or plainly marked as to indicate the circuit metered or metering equipment.
3. Meters which are not direct reading shall have the multiplier plainly marked on the meter.
4. All charts taken from recording meters shall be marked with the date of the record, the meter number, customer, and chart multiplier.
5. Metering equipment shall not be set "fast" or "slow" to compensate for supply transformer or line losses.

##### C. Customer requested rereads

1. Each utility shall at the request of a customer reread that customer's meter within ten working days after such request by the customer.
2. Any reread may be charged to the customer at a rate on file and approved by the Commission, provided that the original reading was not in error.

1. Each utility shall make reasonable efforts to reestablish service within the shortest possible time when service interruptions occur.
  2. Each utility shall make reasonable provisions to meet emergencies resulting from failure of service, and each utility shall issue instructions to its employees covering procedures to be followed in the event of emergency in order to prevent or mitigate interruption or impairment of service.
  3. In the event of a national emergency or local disaster resulting in disruption of normal service, the utility may, in the public interest, interrupt service to other customers to provide necessary service to civil defense or other emergency service agencies on a temporary basis until normal service to these agencies can be restored.
  4. When a utility plans to interrupt service for more than four hours to perform necessary repairs or maintenance, the utility shall attempt to inform affected customers at least 24 hours in advance of the scheduled date and estimated duration of the service interruption. Such repairs shall be completed in the shortest possible time to minimize the inconvenience to the customers of the utility.
  5. The Commission shall be notified of interruption in service affecting the entire system or any significant portion thereof. The interruption of service and cause shall be reported by telephone to the Commission within two hours after the responsible representative of the utility becomes aware of said interruption and followed by a written report to the Commission.
- E. Curtailment
1. Each utility shall file with the Commission as a part of its general tariffs a procedural plan for handling severe supply shortages or service curtailments. The plan shall provide for equitable treatment of individual customer classes in the most reasonable and effective manner given the existing circumstances. When the availability of service is so restricted that the reduction of service on a proportionate basis to all customer classes will not maintain the integrity of the total system, the utility shall develop procedures to curtail service giving service priority to those customers and/or customer classes where health, safety and welfare would be adversely affected.
- F. Construction standard and safety
1. Each utility shall construct all facilities in accordance with the provisions of the 1993 edition (and no future editions) of ANSI C2 (National Electrical Safety Code, incorporated by reference and on file with the Office of the Secretary of State, and the 1995 edition (and no future editions) of ANSI B31.1 (ASME Code for Pressure Piping), incorporated by reference and on file with the Office of the Secretary of State. Copies of the National Electrical Safety Code are available from the Institute of Electrical and Electronic Engineers, Inc., 345 East 47th Street, New York, New York 10017. Copies of the ASME Code for Pressure Piping are available from the American Society of Mechanical Engineers, 345 East 47th Street, New York, New York 10017.
  2. Each utility shall adopt a standard alternating nominal voltage or standard alternating nominal voltages (as may be required by its distribution system) for its entire service area or for each of the several districts into which the system may be divided, which standard voltage or voltages shall be stated in the rules and regulations of each utility and shall be measured at the customer's service entrance. Each utility shall, under normal operating conditions, maintain its standard voltage within the limits of

3. When a reading is found to be in error, the reread shall be at no charge to the customer.
- D. Access to customer premises
  1. Each utility shall have the right of safe ingress to and egress from the customer's premises at all reasonable hours for any purpose reasonably connected with the utility's property used in furnishing service and the exercise of any and all rights secured to it by law or these rules.
- E. Meter testing and maintenance program
  1. Each utility shall file with the Commission a plan for the routine maintenance and replacement of meters which meets the requirements of the 1988 edition (and no future editions) of ANSI C12.1 (American National Standard Code for Electricity Metering), incorporated by reference and on file with the Office of the Secretary of State. Copies are available from the Institute of Electrical and Electronics Engineers, Inc., 345 East 47th Street, New York, New York 10017.
  2. Each utility shall file an annual report with the Commission summarizing the results of the meter maintenance and testing program for that year. At a minimum, the report should include the following data:
    - a. Total number of meters tested, at company initiative or upon customer request.
    - b. Number of meters tested which were outside the acceptable error allowance of  $\pm 3\%$ .
- F. Customer requested meter tests
  1. A utility shall test a meter upon customer request, and each utility shall be authorized to charge the customer for such meter test according to the tariff on file and approved by the Commission. However, if the meter is found to be in error by more than 3%, no meter testing fee will be charged to the customer.
- c. Circumstances that make it dangerous or impossible to read the meter, i.e., locked gates, blocked meters, vicious or dangerous animals, etc.
6. Each bill based on estimated usage will indicate that it is an estimated bill.
- B. Combining meters, minimum bill information
  1. Each meter at a customer's premises will be considered separately for billing purposes, and the readings of two or more meters will not be combined unless otherwise provided for in the utility's tariffs.
  2. Each bill for residential service will contain the following minimum information:
    - a. Date and meter reading at the start of billing period or number of days in the billing period
    - b. Date and meter reading at the end of the billing period
    - c. Billed usage and demand
    - d. Rate schedule number
    - e. Utility telephone number
    - f. Customer's name
    - g. Service account number
    - h. Amount due and due date
    - i. Past due amount
    - j. Adjustment factor, where applicable
    - k. Taxes
    - l. The Arizona Corporation Commission and address, thereof.
- C. Billing terms
  1. All bills for utility services are due and payable no later than ten days from the date the bill is rendered. Any payment not received within this time frame shall be considered past due.
  2. For purposes of this rule, the date a bill is rendered may be evidenced by:
    - a. The postmark date
    - b. The mailing date
    - c. The billing date shown on the bill (however, the billing date shall not differ from the postmark or mailing date by more than 2 days).
  3. All past due bills for utility services are due and payable within 15 days. Any payment not received within this time frame shall be considered delinquent.
  4. All delinquent bills for which payment has not been received within five days shall be subject to the provisions of the utility's termination procedures.
  5. All payments shall be made at or mailed to the office of the utility or to the utility's duly authorized representative.

**Historical Note**

Adopted effective March 2, 1982 (Supp. 82-2). Amended subsection (E)(1) effective April 1, 1986 (Supp. 86-2). Amended effective February 8, 1991 (Supp. 91-1). Amended effective August 16, 1996 (Supp. 96-3).

**R14-2-210. Billing and collection**

- A. Frequency and estimated bills
  1. Each utility shall bill monthly for services rendered. Meter readings shall be scheduled for periods of not less than 25 days or more than 35 days.
  2. If the utility is unable to read the meter on the scheduled meter read date, the utility will estimate the consumption for the billing period giving consideration to the following factors where applicable:
    - a. The customer's usage during the same month of the previous year.
    - b. The amount of usage during the preceding month.
  3. After the second consecutive month of estimating the customer's bill for reasons other than severe weather, the utility will attempt to secure an accurate reading of the meter.
  4. Failure on the part of the customer to comply with a reasonable request by the utility for access to its meter may lead to the discontinuance of service.
  5. Estimated bills will be issued only under the following conditions:
    - a. Failure of a customer who read his own meter to deliver his meter reading card to the utility in accordance with the requirements of the utility billing cycle.
    - b. Severe weather conditions which prevent the utility from reading the meter.
- D. Applicable tariffs, prepayment, failure to receive, commencement date, taxes
  1. Each customer shall be billed under the applicable tariff indicated in the customer's application for service.
  2. Each utility shall make provisions for advance payment of utility services.
  3. Failure to receive bills or notices which have been properly placed in the United States mail shall not prevent such bills from becoming delinquent nor relieve the customer of his obligations therein.
  4. Charges for service commence when the service is installed and connection made, whether used or not.
- E. Meter error corrections
  1. If any meter after testing is found to be more than 3% in error, either fast or slow, proper correction between 3% and the amount of the error shall be made of previous readings and adjusted bills shall be rendered according to the following terms:

- a. For the period of three months immediately preceding the removal of such meter from service for test or from the time the meter was in service since last tested, but not exceeding three months since the meter shall have been shown to be in error by such test.
- b. From the date the error occurred, if the date of the cause can be definitely fixed.
2. No adjustment shall be made by the utility except to the customer last served by the meter tested.
- F. Insufficient funds (NSF) checks
  1. A utility shall be allowed to recover a fee, as approved by the Commission in a tariff proceeding, for each instance where a customer tenders payment for utility service with an insufficient funds check.
  2. When the utility is notified by the customer's bank that there are insufficient funds to cover the check tendered for utility service, the utility may require the customer to make payment in cash, by money order, certified check, or other means which guarantee the customer's payment to the utility.
  3. A customer who tenders an insufficient check shall in no way be relieved of the obligation to render payment to the utility under the original terms of the bill nor defer the utility's provision for termination of service for nonpayment of bills.
- G. Levelized billing plan
  1. Each utility may, at its option, offer its residential customers a levelized billing plan.
  2. Each utility offering a levelized billing plan shall develop upon customer request an estimate of the customer's levelized billing for a 12-month period based upon:
    - a. Customer's actual consumption history, which may be adjusted for abnormal conditions such as weather variations.
    - b. For new customers, the utility will estimate consumption based on the customer's anticipated load requirements.
    - c. The utility's tariff schedules approved by the Commission applicable to that customer's class of service.
  3. The utility shall provide the customer a concise explanation of how the levelized billing estimate was developed, the impact of levelized billing on a customer's monthly utility bill, and the utility's right to adjust the customer's billing for any variation between the utility's estimated billing and actual billing.
  4. For those customers being billed under a levelized billing plan, the utility shall show, at a minimum, the following information on the customer's monthly bill:
    - a. Actual consumption
    - b. Amount due for actual consumption
    - c. Levelized billing amount due
    - d. Accumulated variation in actual versus levelized billing amount.
  5. The utility may adjust the customer's levelized billing in the event the utility's estimate of the customer's usage and/or cost should vary significantly from the customer's actual usage and/or cost; such review to adjust the amount of the levelized billing may be initiated by the utility or upon customer request.
- H. Deferred payment plan
  1. Each utility may, prior to termination, offer to qualifying residential customers a deferred payment plan for the customer to retire unpaid bills for utility service.
2. Each deferred payment agreement entered into by the utility and the customer due to the customer's inability to pay an outstanding bill in full shall provide that service will not be discontinued if:
  - a. Customer agrees to pay a reasonable amount of the outstanding bill at the time the parties enter into the deferred payment agreement.
  - b. Customer agrees to pay all future bills for utility service in accordance with the billing and collection tariffs of the utility.
  - c. Customer agrees to pay a reasonable portion of the remaining outstanding balance in installments over a period not to exceed six months.
3. For the purposes of determining a reasonable installment payment schedule under these rules, the utility and the customer shall give consideration to the following conditions:
  - a. Size of the delinquent account
  - b. Customer's ability to pay
  - c. Customer's payment history
  - d. Length of time that the debt has been outstanding
  - e. Circumstances which resulted in the debt being outstanding
  - f. Any other relevant factors related to the circumstances of the customer.
4. Any customer who desires to enter into a deferred payment agreement shall establish such agreement prior to the utility's scheduled termination date for nonpayment of bills; customer failure to execute a deferred payment agreement prior to the scheduled termination date shall not prevent the utility from discontinuing service for nonpayment.
5. Deferred payment agreements may be in writing and may be signed by the customer and an authorized utility representative.
6. A deferred payment agreement may include a finance charge as approved by the Commission in a tariff proceeding.
7. If a customer has not fulfilled the terms of a deferred payment agreement, the utility shall have the right to disconnect service pursuant to the utility's termination of service rules and, under such circumstances, it shall not be required to offer subsequent negotiation of a deferred payment agreement prior to disconnection.
- I. Change of occupancy
  1. Not less than three working days advance notice must be given in person, in writing, or by telephone at the company's office to discontinue service or to change occupancy.
  2. The outgoing party shall be responsible for all utility services provided and/or consumed up to the scheduled turn-off date.

Historical Note  
Adopted effective March 2, 1982 (Supp. 82-2).

R14-2-211. Termination of service

A. Nonpermissible reasons to disconnect service

1. A utility may not disconnect service for any of the reasons stated below:
  - a. Delinquency in payment for services rendered to a prior customer at the premises where service is being provided, except in the instance where the prior customer continues to reside on the premises.
  - b. Failure of the customer to pay for services or equipment which are not regulated by the Commission.



- c. Nonpayment of a bill related to another class of service.
  - d. Failure to pay for a bill to correct a previous under-billing due to an inaccurate meter or meter failure if the customer agrees to pay over a reasonable period of time.
  - e. A utility shall not terminate residential service where the customer has an inability to pay and:
    - i. The customer can establish through medical documentation that, in the opinion of a licensed medical physician, termination would be especially dangerous to the customer's or a permanent resident residing on the customer's premises health, or
    - ii. Life supporting equipment used in the home that is dependent on utility service for operation of such apparatus, or
    - iii. Where weather will be especially dangerous to health as defined herein or as determined by the Commission.
  - f. Residential service to ill, elderly, or handicapped persons who have an inability to pay will not be terminated until all of the following have been attempted:
    - i. The customer has been informed of the availability of funds from various government and social assistance agencies of which the utility is aware.
    - ii. A third party previously designated by the customer has been notified and has not made arrangements to pay the outstanding utility bill.
  - g. A customer utilizing the provisions of e. or f. above may be required to enter into a deferred payment agreement with the utility within ten days after the scheduled termination date.
  - h. Failure to pay the bill of another customer as guarantor thereof.
  - i. Disputed bills where the customer has complied with the Commission's rules on customer bill disputes.
- B. Termination of service without notice
1. Utility service may be disconnected without advance written notice under the following conditions:
    - a. The existence of an obvious hazard to the safety or health of the consumer or the general population or the utility's personnel or facilities.
    - b. The utility has evidence of meter tampering or fraud.
    - c. Failure of a customer to comply with the curtailment procedures imposed by a utility during supply shortages.
  2. The utility shall not be required to restore service until the conditions which resulted in the termination have been corrected to the satisfaction of the utility.
  3. Each utility shall maintain a record of all terminations of service without notice. This record shall be maintained for a minimum of one year and shall be available for inspection by the Commission.
- C. Termination of service with notice
1. A utility may disconnect service to any customer for any reason stated below provided the utility has met the notice requirements established by the Commission:
    - a. Customer violation of any of the utility's tariffs.
    - b. Failure of the customer to pay a delinquent bill for utility service.
    - c. Failure to meet or maintain the utility's deposit requirements.
    - d. Failure of the customer to provide the utility reasonable access to its equipment and property.
    - e. Customer breach of a written contract for service between the utility and customer.
    - f. When necessary for the utility to comply with an order of any governmental agency having such jurisdiction.
  2. Each utility shall maintain a record of all terminations of service with notice. This record shall be maintained for one year and be available for Commission inspection.
- D. Termination notice requirements
1. No utility shall terminate service to any of its customers without providing advance written notice to the customer of the utility's intent to disconnect service, except under those conditions specified where advance written notice is not required.
  2. Such advance written notice shall contain, at a minimum, the following information:
    - a. The name of the person whose service is to be terminated and the address where service is being rendered.
    - b. The utility tariff that was violated and explanation thereof or the amount of the bill which the customer has failed to pay in accordance with the payment policy of the utility, if applicable.
    - c. The date on or after which service may be terminated.
    - d. A statement advising the customer to contact the utility at a specific address or phone number for information regarding any deferred payment or other procedures which the utility may offer or to work out some other mutually agreeable solution to avoid termination of the customer's service.
    - e. A statement advising the customer that the utility's stated reason for the termination of services may be disputed by contacting the utility at a specific address or phone number, advising the utility of the dispute and making arrangements to discuss the cause for termination with a responsible employee of the utility in advance of the scheduled date of termination. The responsible employee shall be empowered to resolve the dispute and the utility shall retain the option to terminate service after affording this opportunity for a meeting and concluding that the reason for termination is just and advising the customer of his right to file a complaint with the Commission.
  3. Where applicable, a copy of the termination notice will be simultaneously forwarded to designated third parties.
- E. Timing of terminations with notice
1. Each utility shall be required to give at least five days' advance written notice prior to the termination date.
  2. Such notice shall be considered to be given to the customer when a copy thereof is left with the customer or posted first class in the United States mail, addressed to the customer's last known address.
  3. If after the period of time allowed by the notice has elapsed and the delinquent account has not been paid nor arrangements made with the utility for the payment thereof or in the case of a violation of the utility's rules the customer has not satisfied the utility that such violation has ceased, the utility may then terminate service on or after the day specified in the notice without giving further notice.

4. Service may only be disconnected in conjunction with a personal visit to the premises by an authorized representative of the utility.
5. The utility shall have the right (but not the obligation) to remove any or all of its property installed on the customer's premises upon the termination of service.

F. Landlord/tenant rule

1. In situations where service is rendered at an address different from the mailing address of the bill or where the utility knows that a landlord/tenant relationship exists and that the landlord is the customer of the utility, and where the landlord as a customer would otherwise be subject to disconnection of service, the utility may not disconnect service until the following actions have been taken:
  - a. Where it is feasible to so provide service, the utility, after providing notice as required in these rules, shall offer the occupant the opportunity to subscribe for service in his or her own name. If the occupant then declines to so subscribe, the utility may disconnect service pursuant to the rules.
  - b. A utility shall not attempt to recover from a tenant or condition service to a tenant with the payment of any outstanding bills or other charges due upon the outstanding account of the landlord.

Historical Note

Adopted effective March 2, 1982 (Supp. 82-2).

R14-2-212. Administrative and hearing requirements

A. Customer service complaints

1. Each utility shall make a full and prompt investigation of all service complaints made by its customers, either directly or through the Commission.
2. The utility shall respond to the complainant and/or the Commission representative within five working days as to the status of the utility investigation of the complaint.
3. The utility shall notify the complainant and/or the Commission representative of the final disposition of each complaint. Upon request of the complainant or the Commission representative, the utility shall report the findings of its investigation in writing.
4. The utility shall inform the customer of his right of appeal to the Commission.
5. Each utility shall keep a record of all written service complaints received which shall contain, at a minimum, the following data:
  - a. Name and address of the complainant
  - b. Date and nature of the complaint
  - c. Disposition of the complaint
  - d. A copy of any correspondence between the utility, the customer, and/or the Commission.

This record shall be maintained for a minimum period of one year and shall be available for inspection by the Commission.

B. Customer bill disputes

1. Any utility customer who disputes a portion of a bill rendered for utility service shall pay the undisputed portion of the bill and notify the utility's designated representative that such unpaid amount is in dispute prior to the delinquent date of the bill.
2. Upon receipt of the customer notice of dispute, the utility shall:
  - a. Notify the customer within five working days of the receipt of a written dispute notice.
  - b. Initiate a prompt investigation as to the source of the dispute.

- c. Withhold disconnection of service until the investigation is completed and the customer is informed of the results. Upon request of the customer the utility shall report the results of the investigation in writing.
- d. Inform the customer of his right of appeal to the Commission.

3. Once the customer has received the results of the utility's investigation, the customer shall submit payment within five working days to the utility for any disputed amounts. Failure to make full payment shall be grounds for termination of service.

C. Commission resolution of service and/or bill disputes

1. In the event a customer and utility cannot resolve a service and/or bill dispute, the customer shall file a written statement of dissatisfaction with the Commission; by submitting such notice to the Commission, the customer shall be deemed to have filed an informal complaint against the utility.
2. Within 30 days of the receipt of a written statement of customer dissatisfaction related to a service or bill dispute, a designated representative of the Commission shall endeavor to resolve the dispute by correspondence and/or telephone with the utility and the customer. If resolution of the dispute is not achieved within 20 days of the Commission representative's initial effort, the Commission shall hold an informal hearing to arbitrate the resolution of the dispute. The informal hearing shall be governed by the following rules:
  - a. Each party may be represented by legal counsel, if desired.
  - b. All such informal hearings may be recorded or held in the presence of a stenographer.
  - c. All parties will have the opportunity to present written or oral evidentiary material to support the positions of the individual parties.
  - d. All parties and the Commission's representative shall be given the opportunity for cross-examination of the various parties.
  - e. The Commission's representative will render a written decision to all parties within five working days after the date of the informal hearing. Such written decision of the arbitrator is not binding on any of the parties and the parties will still have the right to make a formal complaint to the Commission.
3. The utility may implement normal termination procedures if the customer fails to pay all bills rendered during the resolution of the dispute by the Commission.
4. Each utility shall maintain a record of written statements of dissatisfaction and their resolution for a minimum of one year and make such records available for Commission inspection.

D. Notice by utility of responsible officer or agent

1. Each utility shall file with the Commission a written statement containing the name, address (business, residence and post office) and telephone numbers (business and residence) of at least one officer, agent or employee responsible for the general management of its operations as a utility in Arizona.
2. Each utility shall give notice, by filing a written statement with the Commission, of any change in the information required herein within five days from the date of any such change.

E. Incomplete application for a Certificate of Convenience, transfer of a Certificate of Convenience, rate review

1. Applications will not be assigned a docket number until the application is complete according to the Arizona Revised Statutes and the Commission's rules and regulations.
  2. The Commission shall within 15 days of receipt return the incomplete application making note of such deficiencies.
- F. Filing of tariffs
1. Each utility shall file with the Commission tariffs which are in compliance with the rules and regulations promulgated by the Arizona Corporation Commission within 120 days of the effective date of such rules.
  2. Each utility shall file with the Commission any proposed changes to the tariffs on file with the Commission; such proposed changes shall be accompanied by a statement of justification supporting the proposed tariff change.
  3. Any proposed change to the tariffs on file with the Commission shall not be effective until reviewed and approved by the Commission.
- G. Accounts and records
1. Each utility shall keep general and auxiliary accounting records reflecting the cost of its properties, operating income and expense, assets and liabilities, and all other accounting and statistical data necessary to give complete and authentic information as to its properties and operations.
  2. Each utility shall maintain its books and records in conformity with the Uniform Systems of Accounts for Class A, B, C and D Electric Utilities as adopted and amended by the Federal Energy Regulatory Commission or, for electric cooperatives, as promulgated by the Rural Electrification Administration.
  3. A utility shall produce or deliver in this state any or all of its formal accounting records and related documents requested by the Commission. It may, at its option, provide verified copies of original records and documents.
  4. All utilities shall submit an annual report to the Commission on a form prescribed by it. The annual report shall be filed on or before the 15th day of April for the preceding calendar year. Reports prepared by a certified or licensed public accountant on the utility, if any, shall accompany the annual report.
  5. All utilities shall file with the Commission a copy of all reports required by the Securities and Exchange Commission.
  6. All utilities shall file with the Commission a copy of all annual reports required by the Federal Energy Regulatory Commission and in addition, for electric cooperatives, annual reports required by the Rural Electrification Administration.
- H. Maps
1. All utilities shall file with the Commission a map or maps clearly setting forth the location and extent of the area or areas they hold under approved certificates of convenience and necessity, in accordance with the Cadastral (Rectangular) Survey of the United States Bureau of Land Management, or by metes and bounds with a starting point determined by the aforesaid Cadastral Survey.
- I. Variations, exemptions of Commission rules and regulations
1. Variations or exemptions from the terms and requirements of any of the rules included herein (Title 14, Chapter 2, Article 2) shall be considered upon the verified application of an affected party to the Commission setting forth the circumstances whereby the public interest requires such variation or exemption from the Commission rules and regulations. Such application will be sub-

ject to the review of the Commission, and any variation or exemption granted shall require an order of the Commission. In case of conflict between these rules and regulations and an approved tariff or order of the Commission, the provisions of the tariff or order shall apply.

J. Prior agreements

1. The adoption of these rules by the Commission shall not affect any agreements entered into between the utility and customers or other parties who, pursuant to such contracts, arranged for the extension of facilities in a provision of service prior to the effective date of these rules.

Historical Note

Adopted effective March 2, 1982 (Supp. 82-2).

R14-2-213. Conservation

Energy conservation plan

1. The Arizona Corporation Commission recognizes the need for conservation of energy resources in order to maintain an adequate and continuous supply of safe, dependable, and affordable energy. Therefore, in order to promote the state's economic development and the health and welfare of its citizenry, each class A and B electric utility shall file an energy conservation plan which encompasses at a minimum the following considerations:
  - a. Development of consumer education and assistance programs to aid the populace in reducing energy consumption and cost.
  - b. Participation in various energy conservation programs sponsored by other municipal, state or federal government entities having such jurisdiction.
2. Each utility shall file an energy conservation plan with the Commission within one year of the effective date of these rules and annual updates thereafter when changes require such.

Historical Note

Adopted effective March 2, 1982 (Supp. 82-2).

ARTICLE 3. GAS UTILITIES

R14-2-301. Definitions

In this Article, unless the context otherwise requires, the following definitions shall apply:

1. "Advance in aid of construction". Funds provided to the utility by the applicant under the terms of a main extension agreement the value of which may be refundable.
2. "Applicant". A person requesting the utility to supply gas service.
3. "Application". A request to the utility for gas service, as distinguished from an inquiry as to the availability or charges for such service.
4. "Arizona Corporation Commission". The regulatory authority of the state of Arizona having jurisdiction over public service corporations operating in Arizona.
5. "Billing month". The period between any two regular readings of the utility's meters at approximately 30 day intervals.
6. "Billing period". The time interval between two consecutive meter readings that are taken for billing purposes.
7. "British Thermal Unit". The amount of heat required to raise the temperature of one pound of water one degree Fahrenheit (1°F) at standard conditions.
8. "Btu". British thermal unit.
9. "Commodity charge". The unit of cost per billed usage, as set forth in the utility's tariffs.

# Estimation Procedures

Situation	History	Procedure	Participants Comments
1.a. kWh estimate At least one years history available.	Same customer same premise.	<p>A) Use same month last year B) Previous Month C) Prior year/prior month (customer average daily usage for same season last year or current season).</p> <p>Utilities use different combinations of these methodologies to estimate bills but all 3 procedures are considerations. PSWG concludes that these methods comply with R14-2-210.</p>	<p>APS same process. Mohave – same process. Navopache – please clarify. SRP same process. SSVEC same process. TEP same process. UNS ELECTRIC same process.</p>
	Same customer same premise. History available for less than a year.	<p>Estimates are based on previous month's usage in same season, load profile, or similar customers.</p>	<p>APS uses per day usage with seasonal considerations. Mohave – needs clarification on this situation. Navopache – please clarify. SRP would estimate manually on history or get a check read. SSVEC – Over 10 days bill at zero. TEP uses load profile of like customers. UNS ELECTRIC uses load profile of like customers.</p>
1.b. kWh estimate Limited History	New customer with premise history. A years worth of premise history is available.	<p>Estimates are based on previous month's usage in same season, load profiling, or similar customers.</p>	<p>APS uses seasonal evaluations averaging most recent seasonal use. Per diem average for partial months. Navopache – please clarify. SRP uses Customer Usage (CUP) Patterns of like accounts and manually estimates. SSVEC – Over 10 days bill at zero with basic charges. Mohave – If what is meant is that we have less than a years worth of history, then we would prorate the bill to the normal read date. TEP uses trending and load profiling on premise history. UNS ELECTRIC 5 days or less will hold over until next months bill. 5 days or more will send serviceman out to get good read.</p>

## Estimation Procedures

Situation	History	Procedure	Participants Comments
1.c. kWh estimate  No history	New customer new premise.	Utilities use a variety of "rule-of-thumb" estimates for the first bill with no account history. This first bill may be adjusted when the next valid read is obtained.	<p>APS - less than 10 days, no estimate. Over 10 days, 20 kWh per day on initial bill, estimate thereafter using the "estimator".</p> <p>APS uses class daily average or "minimum usage".</p> <p>Grand Canyon- no consumption would be billed but basic charges would be applied.</p> <p>SSVEC over 10 days bill at zero with basic charges.</p> <p>Mohave would prorate the bill to the normal read date.</p> <p>Navopache - please clarify.</p> <p>SRP - 15 days or less will hold over until next months bill.</p> <p>More than 15 days SRP will manually estimate or issue a check read for actual read that can be prorated to read date.</p> <p>TEP would estimate with Segment profiling.</p> <p>TRICO -no read, no bill.</p> <p>UNS ELECTRIC 5 days or less will hold over until next months Bill. 5 days or more, will send serviceman out to get good Read.</p>
2.a. kW estimate  At least one years history available.	Same customer same premise.		<p>TEP CIS system does not estimate kW -- however, rates that have kW have recorders. MV90 could supply the kW using load profile data.</p> <p>UNS ELECTRIC -</p> <p>APS -- Approximately 160,000 demand metered customers. Using rate class average load factor reduces volatility or estimated demand. Over estimate are corrected upon subsequent reads.</p> <p>SRP: To estimate kW involves several steps.</p> <ol style="list-style-type: none"> <li>1. minimum hours run = prior period related kWh meter usage divided by the prior period kW usage.</li> <li>2. prior period bill hours = prior period number of days * 24</li> <li>3. Load Factor = minimum hours run divided by prior period bill hours</li> <li>4. current bill hours = current number of days in cycle * 24</li> <li>5. estimated kW = current related kWh meter usage divided by the (load factor * current bill hours)</li> <li>6. estimated read = estimated kW divided by multiplier.</li> </ol>

# Estimation Procedures

Situation		History	Procedure	Participants Comments
2. b. kW estimate. Limited History	Same customer same premise. History available for less than a year.			APS -- Same as 2. a. SRP -- Same as 2. a. TEP -- Same as 2. a. UNS ELECTRIC -
	New customer new premise. History available for less than a year			APS -- Same as 2. a. SRP -- Same as 2. a. TEP -- Same as 2. a. UNS ELECTRIC -
	New customer new premise.			APS -- Same as 2. a. SRP -- Same as 2. a. TEP -- Same as 2. a. UNS ELECTRIC -
3. a. TOU estimate. At least one years history available.	Same customer same premise.		On/Off Peak energy percentages are from either customer or class average applied to estimated kWh energy.	APS has approximately 350,000 TOU customers. APS applies the rate class seasonal average on/off energy percentages to the kWh estimated per Section 1 above. (Patti is reviewing this comment with Robbie). SRP -- same procedure used for estimating a kWh meter listed previously. TEP CIS system will estimate On/Off peak but shoulder has to be manually estimated using trend analysis. UNS ELECTRIC -
	Same customer same premise. History available for less than a year.		On/Off Peak energy percentages are from either customer or class average applied to estimated kWh energy.	APS -- Same as 3. a. SRP would estimate manually on history or get a check read TEP CIS system will estimate On/Off peak but shoulder has to be manually estimated using load profiling of like customers. UNS ELECTRIC -
	New customer with premise history. History available for a year.		On/Off Peak energy percentages are from either customer or class average applied to estimated kWh energy.	APS -- Same as above 3. a. SRP uses Customer Usage (CUP) Patterns of like accounts and manually estimates. TEP -- Use load profiling manually. UNS ELECTRIC -

## Estimation Procedures

Situation	History	Procedure	Participants Comments
	New customer new premise. History available for less than a year	On/Off Peak energy percentages are from either customer or class average applied to estimated kWh energy.	APS – Same as above 3.a. SRP – same procedure used for estimating a kWh meter listed previously TEP – Use load profiling manually. UNS ELECTRIC -
	Same customer same premise. History available for less than a year.	On/Off Peak energy percentages are from either customer or class average applied to estimated kWh energy.	APS – Same as above 3.a. SRP would estimate manually on history or get a check read TEP – Use load profiling manually. UNS ELECTRIC -
	3. b. TOU estimate. Limited history	On/Off Peak energy percentages are from either customer or class average applied to estimated kWh energy.	APS – Same as 3.a. SRP – 15 days or less will hold over until next months bill. More than 15 days will manually estimate or issue a check read for actual read that can be prorated to read date. TEP CIS system will estimate On/Off peak but manually have to estimate shoulder using trending analysis. UNS ELECTRIC -

**COMMISSIONERS**  
MARC SPITZER - Chairman  
WILLIAM A. MUNDELL  
JEFF HATCH-MILLER  
MIKE GLEASON  
KRISTIN K. MAYES



BRIAN C. MCNEIL  
Executive Secretary

**ARIZONA CORPORATION COMMISSION**

October 12, 2004

Thomas L. Mumaw, Esq.  
Senior Attorney  
Pinnacle West Capital Corporation  
Mail Station 8695  
400 North Fifth Street, P.O. Box 53999  
Phoenix, AZ 85072-3999

Thomas.Mumaw@pinnaclewest.com  
FAX: (602) 250-3393  
Via First-Class Mail

Re: Staff's **Second** Set of Data Requests to Arizona Public Service Company  
Billing Estimation and Meter Reading Inquiry

Dear Mr. Mumaw:

Please treat this as Staff's **second** set of data requests to Arizona Public Service Company in the above-referenced matter. Please note that these data requests contain an attachment that lists customer-specific information.

For purposes of this data request set, the words "APS," "you," and "your" refer to Arizona Public Service Company, and any representative, including every person and/or entity acting with, under the control of, or on behalf of Arizona Public Service Company. For each answer, please identify by name, title, and address each person providing information that forms the basis for the response provided.

These data requests are continuing, and your answers or any documents supplied in response to these data requests should be supplemented with any additional information or documents that come to your attention after you have provided your initial responses.

Please respond within **ten** calendar days of your receipt of this letter. **Please provide one hard copy of the requested data directly to each of the following addresses.**

- (1) Connie Walczak, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (2) Caroline Butler, Legal Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007

Sincerely,

Janet Wagner  
Attorney, Legal Division  
(602) 542-3402

JW:vk

Attachment

cc: Connie Walczak  
Erinn Andreasen  
Jana Van Ness [[Jana.VanNess@aps.com](mailto:Jana.VanNess@aps.com)]



**Staff's Second Set of Data Requests to  
Arizona Public Service Company  
Billing Estimation and Meter Reading Inquiry  
October 12, 2004**

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Staff 2-1 Please answer questions "a" through "g" for each of the customers listed on the accompanying attachment.

- a. Identify and provide a copy of all estimated bills sent to these customers since 1990. Also, provide the bills from the month before and the month after each estimated bill.
- b. For each estimated bill, explain in detail why it was estimated.
- c. For reason identified in response to part b, identify the ACC regulation that permits the estimation. (Use both old rule 210 and most recent rule 210).
- d. Please list any bills that were estimated but that do not specifically fall within the parameters listed in either old rule 210(A)(5) or most recent rule 210(A)(3). For each such bill, please explain why it was estimated and identify the steps that APS took to contact the customer to obtain a meter read.
- e. For each estimated bill, please identify the rate schedule to which the customer subscribed. In addition, please indicate whether the estimation was for demand only, kWh only, TOU only, or a combination. If a combination, please identify all usage elements that were estimated.
- f. For each estimated bill, please provide a worksheet that describes the process and calculations by which the estimation was determined. Please include a narrative description of the process.
- g. Please indicate which, if any, of these customers' bills were automatically estimated using billing software. Please indicate which bills, if any, were manually estimated.

**Staff's Second Set of Data Requests to  
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October 12, 2004**

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- Staff 2-2 Regarding Mr. Aguirre's estimated bill for \$3,633.26, please specifically describe the methodology used to estimate that bill.
- a. The customer claims that his normal bill is usually \$45-55/month. Please explain why this estimate is so much higher than the customer's normal bill.
- Staff 2-3 Ms. Rathbun claimed that her bill was estimated for four consecutive months in (year). She was eventually advised that her meter had a calcium buildup that prevented her meter reader from reading it. Please explain why the meter was not immediately replaced if it could not be read.
- Staff 2-4 Please explain why Ms. Rathbun was offered a \$100 credit and verify whether she received it.
- Staff 2-5 Regarding Ms. Myers, APS installed a new meter in June, but her usage was estimated the following two months. Please explain why her bills were estimated after installing a new meter.

**Staff's Second Set of Data Requests to  
Arizona Public Service Company  
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October 12, 2004**

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**ATTACHMENT**

- 1) Fernando Aguirre  
6235 North 51<sup>st</sup> Avenue  
Glendale, Arizona 85301.

The Company estimated Mr. Aguirre's bill on September 19, 2001 (\$3,633.26) and November 27, 2001 (\$103.19).

- 2) Mary Toscano  
721 Monroe, # 3  
Globe, Arizona 85501, Account No. 285182288.
- 3) Doris Parker  
3730 Dinky Creek  
Camp Verde, Arizona 86322, Account No. 028353280.
- 4) Susie Rathbun  
P.O. Box 945  
Tonto Basin, Arizona 85553, Account No. 729421284.
- 5) Iris Newby  
5486 East Utility Street  
Globe, Arizona 85501, Account No. 671801285.
- 6) Robert L. Pitroff, Jr.  
509 North Second Street  
Clarkdale, Arizona, Account No. 424280280.
- 7) Juan Jaurecue  
1402 North 31<sup>st</sup> Place  
Phoenix, Arizona 85008.
- 8) Amy Pasierb  
9420 North Central Avenue  
Phoenix, Arizona 85020.
- 9) Peggy McClure  
10618 North 37<sup>th</sup> Avenue  
Phoenix, Arizona 85029.

**Staff's Second Set of Data Requests to  
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- 10) Joe Freedman  
40020 North 71<sup>st</sup> Street  
Cave Creek, Arizona 85331, Account No. 452283281.
- 11) William Swineford, Jr.  
1411 East Earll Drive  
Phoenix, Arizona 85014.
- 12) Bill Maxwell  
2118 West Grant  
Phoenix, Arizona 85009, Account No. 923413285.
- 13) Bobby Tucker  
12235 South Paula Avenue  
Yuma, Arizona 85367, Account No. 387223281.
- 14) Edward Murphy  
1440 East Laguna Place, # 9  
Yuma, Arizona 85365, Account Nos. 717883288 and 795510281.
- 15) Jerry Baldenegro  
5515 West Oranewood Avenue  
Glendale, Arizona 85301.
- 16) Shawn Taylor  
1925 East Libby Street  
Phoenix, Arizona 85022.
- 17) Danny Bolser  
14240 East 28<sup>th</sup> Street  
Yuma, Arizona 85367.
- 18) Bobby Holeman  
2606 West Jefferson Street  
Phoenix, Arizona 85009.
- 19) Tim Johnson  
17150 Cedarwood Drive  
Munds Park, Arizona 86017.

**Staff's Second Set of Data Requests to  
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October 12, 2004**

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- 20) Dewayne Young  
615 East Del Rio Street  
Chandler, Arizona 85225.
- 21) Robert Ross  
7160 Lindsey Road  
Flagstaff, Arizona 86004.
- 22) Judy Hartman  
5949 South Hargis Ranch Road  
Hereford, Arizona 85615.
- 23) Joseph Madoneczky  
8301 Gary Court  
Prescott Valley, Arizona 86314.
- 24) Margaret Myers  
2650 West Union Hills  
Phoenix, Arizona 85027.
- 25) Dan Cassil  
1105 North 8<sup>th</sup> Street, #105  
Avondale, Arizona 85323.
- 26) Dorothy Beauchamp  
4844 North 74<sup>th</sup> Place  
Scottsdale, Arizona 85251, Account No. 1000841280.
- 27) Jeri Scott  
3253 East Grandview Drive  
Cottonwood, Arizona 86326.
- 28) Josephine Perez  
113 Papago Blvd.  
Winslow, Arizona 86047.
- 29) Ralph Remes  
16423 North 37<sup>th</sup> Street  
Phoenix, Arizona 85032, Account No. 813211282.

**Staff's Second Set of Data Requests to  
Arizona Public Service Company  
Billing Estimation and Meter Reading Inquiry  
October 12, 2004**

---

- 30) Darrell Hicks  
3601 North 15<sup>th</sup> Avenue, # 3  
Phoenix, Arizona.
- 31) Al Brooks  
2926 West Caribbean Lane  
Phoenix, Arizona 85053.
- 32) Vicki Morgan  
Cornville, Arizona 86325.
- 33) Larry Ellerman  
3201 North 3<sup>rd</sup> Street  
Phoenix, Arizona 85012.
- 34) Kimberly Halvorsen  
15826 West Durango Street  
Goodyear, Arizona 85338.
- 35) Margaret Scrip  
3435 West Hearn Road  
Phoenix, Arizona 85053.

**COMMISSIONERS**  
MARC SPITZER - Chairman  
WILLIAM A. MUNDELL  
JEFF HATCH-MILLER  
MIKE GLEASON  
KRISTIN K. MAYES



BRIAN C. MCNEIL  
Executive Secretary

**ARIZONA CORPORATION COMMISSION**

October 13, 2004

Thomas L. Mumaw, Esq.  
Senior Attorney  
Pinnacle West Capital Corporation  
Mail Station 8695  
400 North Fifth Street, P.O. Box 53999  
Phoenix, AZ 85072-3999

Thomas.Mumaw@pinnaclewest.com  
FAX: (602) 250-3393  
Via First-Class Mail

Re: Staff's **Third** Set of Data Requests to Arizona Public Service Company  
Billing Estimation and Meter Reading Inquiry

Dear Mr. Mumaw:

Please treat this as Staff's **third** set of data requests to Arizona Public Service Company in the above-referenced matter. Please note that these data requests contain an attachment that lists customer-specific information.

For purposes of this data request set, the words "APS," "you," and "your" refer to Arizona Public Service Company, and any representative, including every person and/or entity acting with, under the control of, or on behalf of Arizona Public Service Company. For each answer, please identify by name, title, and address each person providing information that forms the basis for the response provided.

These data requests are continuing, and your answers or any documents supplied in response to these data requests should be supplemented with any additional information or documents that come to your attention after you have provided your initial responses.

Please respond within **ten** calendar days of your receipt of this letter. **Please provide one hard copy of the requested data directly to each of the following addresses.**

- (1) Erinn Andreasen, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (2) Steve Irvine, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.

Thomas L. Mumaw, Esq.  
Pagae 2  
October 13, 2004

- (3) Caroline Butler, Legal Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007

Sincerely,

Janet Wagner  
Attorney, Legal Division  
(602) 542-3402

JW:vk

Attachment

cc: Erinn Andreasen  
Steve Irvine  
Jana Van Ness [[Jana.VanNess@aps.com](mailto:Jana.VanNess@aps.com)]



**Staff's Third Set of Data Requests to  
Arizona Public Service Company  
Billing Estimation and Meter Reading Inquiry  
October 12, 2004**

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- STF 3-1 Please provide the total number of customer meters in APS' service territory.
- a) Please provide the total number of meters installed in the field.
  - b) How many of the meters installed in the field are demand meters?
  - c) Please provide the responses to parts (a) and (b) broken down by customer class.
- STF 3-2 Referring to the response to Staff 1-1 (second sentence), one could assume that some demand meters do not require physical access to be read. Please indicate whether this assumption is correct.
- If this is correct, please provide the following:
- a) How many demand meters installed in the field require a probe read for either demand, usage, or both?
  - b) How many meters installed in the field do not require a probe read for either demand, usage, or both?
  - c) Please generally describe the difference between these two types of meters and what factors are considered in their implementation in the field.
- STF 3-3 Referring to page 5 of 10 of APS' "Methodologies for Estimating Customer Usage Without Meter Reads" (Revised 8/2/04), footnote number 1:
- a) The footnote indicates that "the on-peak hours were overstated as 13 hours for *all days*." Does *all days* refer to week days and week ends combined? If yes, please provide the formula and calculation used for estimating demand for time-of-use utilizing 13 hours, 7 days per week.
  - b) Does APS believe that overstating the hours and days (if applicable) for on-peak period estimations caused customer estimations to be higher than they would have been if the provisions of the tariffed rate (such as 12 on-peak hours and 5 days per week) were utilized?
  - c) Please identify the Commission decision approving the "superceded rate schedule" referred to in the footnote.
- STF 3-4 Please explain why the "Degree Day Method" of estimation is appropriate for estimating customer bills when energy diversion is suspected or confirmed. Is this method considered more rigorous than the other methods employed for estimating generally? Please explain further.

**Staff's Third Set of Data Requests to  
Arizona Public Service Company  
Billing Estimation and Meter Reading Inquiry  
October 12, 2004**

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STF 3-5 Referring to page 8, lines 20-28 and page 9, lines 1-2 of APS' Response to the Read Complaint before the Commission:

- a) When the billing system creates an exception because an actual demand read was higher than the estimated demand, what factors does the billing representative consider in determining whether the estimated demand was too high or accurate? For instance, if the demand from the actual read is less than the estimated demand, is the demand always adjusted down or are seasonality, the customer's demand history, or other factors considered?
- b) If other factors are considered, please identify the factors considered by the billing representative.

STF 3-6 Exhibit APS05679, paragraph 17, which was provided in response to Staff 1-6, states that billing representatives have the authority to revise estimates by calculating demand using available historical information when class based estimates appear unreasonable.

- a) Do billing associates have access to customer specific data in each case when making decisions regarding use of class data for kW rather than customer specific kW data?
- b) Do billing associates actually view customer specific data on each occasion when they estimate kW?
- c) Does the reasonableness check always include a comparison to a customer's own historic data?
- d) Since the new CIS was implemented, how many estimated bills are issued in total each year due to lack of kW information?
- e) Of those, how many were based on class average?
- f) Of those, how many were based on a customer's demand use from the previous month or the last year's previous month?
- g) If such information is available, in those cases where class average is used, on how many occasions did a billing associate make a comparison between the customer's own specific data from the previous month or the same month of last year to class data?

STF 3-7 Referring to page 1, item #4 of 'Areas Reviewed that Need Improvement' of the Executive Summary of CIS Compliance to ACC Rules and Regulations Audit #21054 given in response to Staff 1-16:

- a) Is a non-residential customer's own historic demand data only used in response to inquiries by customers about an estimated bill?
- b) How many estimations have been questioned annually by non-residential customers in the last 5 years?

**Staff's Third Set of Data Requests to  
Arizona Public Service Company  
Billing Estimation and Meter Reading Inquiry  
October 12, 2004**

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- c) What are these annual figures expressed as a percentage of all estimated non-residential bills annually in the last 5 years?
- d) Does APS inform customers that it will reconsider an estimated bill if a customer believes the estimate is not representative of his true demand?
- e) If so, how?
- f) What has APS done in specific response to area for improvement item #4 discussed above?

STF 3-8 Identify the barriers to implementing in APS' automated billing system a method of demand estimation that utilizes customer specific demand data. If cost is one of the barriers, quantify and describe the component costs.

STF 3-9 Referring to the response to Staff 1-8:

Given that some customers' demand is lower than the class average for a particular month, why does APS believe that the consistent application of average class load factor to the customer's estimated energy provides a reasonable and fair demand estimate?

STF 3-10 Paragraph 18 of Exhibit APS05679, which was provided in response to Staff 1-6, describes that APS lowered the load factor percentages used to calculate estimated demands from 45% and 50%, respectively, to 35% for all types of residential demand rate accounts.

- a) Please identify the residential rate classes referred to in Exhibit APS05679 for which APS used load factors of 45% and 50% to calculate estimated demands.
- b) Did APS have residential rate classes whose load factors were 45% and 50% prior to July 2002 and 35% after July 2002?
- c) If so, what accounts for such a decline in the load factor?
- d) How frequently does APS compare the load factors used in demand estimation to load research data?
- e) What method or criteria is used in deciding whether to adjust load factors used in demand estimation in response to load research data?

STF 3-11 APS' response to Staff 1-32 mentions that there may be instances where the meter was determined by the meter reader to be inaccessible, but subsequent investigation reveals that perhaps the meter reader could have accessed the meter. Do such instances exist? If so, how many have occurred yearly since 1995?

**Staff's Third Set of Data Requests to  
Arizona Public Service Company  
Billing Estimation and Meter Reading Inquiry  
October 12, 2004**

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- STF 3-12      Exhibit APS05341, page 11, lines 12-16, provided in response to Staff 1-39, describes that the old CIS load factor was an average of kW of the two previous months, the same month of last year, and the peak demand of other customers. Exhibit APS05676, paragraph 6, provided in response to Staff 1-6, states that the old CIS was an average of kW of the two previous months and the same month of last year.
- Did old CIS calculate load factor using an average of historic months and class average?
- STF 3-13      Referring to APS' response to the Read complaint, paragraph 72 refers to concerns that estimates of the old CIS were either too high or too low, mostly too low.
- a)            What is the basis for concern that old CIS estimates were either too high or too low?
  - b)            Was the extent to which the estimates were too high or too low studied or evaluated?
  - c)            If so, please provide any documents that relate to the study or its conclusions.
- STF 3-14      Referring to Janet Smith's emails of June 19, 2002 and November 30, 2000 and paragraph 72 of the APS response to the Read Complaint:
- Why would APS respond to a belief that estimated demands were too low by lowering the load factors used in estimating demand?
- STF 3-15      Referring to paragraph 4 of Janet Smith's email to Ravi Nair of June 25, 2002:
- Why has APS adopted a method of estimating demand based on the use of the customer class load factor given that a customer's specific load factor is more reflective of the customer's own usage characteristics?
- STF 3-16      Please explain how the response to Staff 1-2 indicates the number of estimations that were demand only, energy only, or both demand and energy as described in item b of Staff 1-2.
- STF 3-17      Assuming that Exhibit APS06492 is intended to respond to Staff 1-3, does "Service Counts" represent all customer accounts, all meters, or some other designation? Please explain. Please explain significant deviations to the total numbers of bills issued in months such as September of 1998, October of 1999, July of 2000, and all other months that demonstrate similar significant deviations.

**Staff's Third Set of Data Requests to  
Arizona Public Service Company  
Billing Estimation and Meter Reading Inquiry  
October 12, 2004**

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STF 3-18 Referring to APS' response to the Read complaint, paragraph 74 cites a Janet Smith email stating, "The billing consultants and associates used various methods to estimate demands when needed (it varied depending on the person doing the estimating, not the situation)."

Does this statement mean that, when estimating manually, the selection of estimation method was more a function of a billing representative's preferences for a particular method of estimation than a function of how appropriately a given estimation method suited the circumstances of a given billing situation?

STF 3-19 Referring to Exhibit APS05333, lines 22 to 25, regarding Avis Read's bills:

- a) Please describe the computer problems that prevented APS from sending a bill from September 1999 to February 2000.
- b) Did these computer problems affect other customers?
- c) If so, please indicate how many customers were affected by these same problems. For each customer, please indicate the time period over which APS failed to send a bill.

STF 3-20 In the preliminary statement to APS' Response to Avis Read's complaint before the Commission, APS states that, "[b]ecause of the pendency of that Application before the Commission, the Superior Court . . . dismissed the case to allow the Commission to rule **on the pending Application** in the first instance." (APS Resp. at 5 (emphasis in original)).

- a) Please identify the source(s) of this statement, and include citations to the Superior Court record in the Read Complaint for each source.

**COMMISSIONERS**  
MARC SPITZER - Chairman  
WILLIAM A. MUNDELL  
JEFF HATCH-MILLER  
MIKE GLEASON  
KRISTIN K. MAYES



**BRIAN C. MCNEIL**  
Executive Secretary

**ARIZONA CORPORATION COMMISSION**

October 27, 2004

Thomas L. Mumaw, Esq.  
Senior Attorney  
Pinnacle West Capital Corporation  
Mail Station 8695  
400 North Fifth Street, P.O. Box 53999  
Phoenix, AZ 85072-3999

Thomas.Mumaw@pinnaclewest.com  
FAX: (602) 250-3393  
Via First-Class Mail

Re: Staff's **Fourth** Set of Data Requests to Arizona Public Service Company  
Billing Estimation and Meter Reading Inquiry

Dear Mr. Mumaw:

Please treat this as Staff's **fourth** set of data requests to Arizona Public Service Company in the above-referenced matter.

For purposes of this data request set, the words "APS," "you," and "your" refer to Arizona Public Service Company, and any representative, including every person and/or entity acting with, under the control of, or on behalf of Arizona Public Service Company. For each answer, please identify by name, title, and address each person providing information that forms the basis for the response provided.

These data requests are continuing, and your answers or any documents supplied in response to these data requests should be supplemented with any additional information or documents that come to your attention after you have provided your initial responses.

Please respond within **ten** calendar days of your receipt of this letter. **Please provide one hard copy of the requested data directly to each of the following addresses.**

- (1) Erinn Andreasen, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (2) Steve Irvine, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.

Thomas L. Mumaw, Esq.  
Pagae 2  
October 27, 2004

(3) Caroline Butler, Legal Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007

Sincerely,

Janet Wagner  
Attorney, Legal Division  
(602) 542-3402

JW:vk  
Attachment  
cc: Erinn Andreasen  
Steve Irvine  
Jana Van Ness [[Jana.VanNess@aps.com](mailto:Jana.VanNess@aps.com)]

**Staff's Fourth Set of Data Requests to  
Arizona Public Service Company  
Billing Estimation and Meter Reading Inquiry  
October 27, 2004**

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Staff 4-1      In reference to APS response to Staff 1-3, Please provide total service counts/bills broken down by year, month, and rate code for August 1999 through September 2004.



**COMMISSIONERS**  
MARC SPITZER - Chairman  
WILLIAM A. MUNDELL  
JEFF HATCH-MILLER  
MIKE GLEASON  
KRISTIN K. MAYES



**BRIAN C. MCNEIL**  
Executive Secretary

**ARIZONA CORPORATION COMMISSION**

October 29, 2004

Thomas L. Mumaw, Esq.  
Senior Attorney  
Pinnacle West Capital Corporation  
Mail Station 8695  
400 North Fifth Street, P.O. Box 53999  
Phoenix, AZ 85072-3999

Thomas.Mumaw@pinnaclewest.com  
FAX: (602) 250-3393  
Via First-Class Mail

Re: Staff's **Fifth** Set of Data Requests to Arizona Public Service Company  
Billing Estimation and Meter Reading Inquiry

Dear Mr. Mumaw:

Please treat this as Staff's **fifth** set of data requests to Arizona Public Service Company in the above-referenced matter.

For purposes of this data request set, the words "APS," "you," and "your" refer to Arizona Public Service Company, and any representative, including every person and/or entity acting with, under the control of, or on behalf of Arizona Public Service Company. For each answer, please identify by name, title, and address each person providing information that forms the basis for the response provided.

These data requests are continuing, and your answers or any documents supplied in response to these data requests should be supplemented with any additional information or documents that come to your attention after you have provided your initial responses.

Please respond within **ten** calendar days of your receipt of this letter. **Please provide one hard copy of the requested data directly to each of the following addresses.**

- (1) Erinn Andreasen, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (2) Steve Irvine, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.

Thomas L. Mumaw, Esq.

Page 2

October 28, 2004

- (3) Caroline Butler, Legal Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.

Sincerely,

Janet Wagner  
Attorney, Legal Division  
(602) 542-3402

JW:vk

Attachment

cc: Erinn Andreasen

Steve Irvine

Jana Van Ness [[Jana.VanNess@aps.com](mailto:Jana.VanNess@aps.com)]

**Staff's Fifth Set of Data Requests to  
Arizona Public Service Company  
Billing Estimation and Meter Reading Inquiry  
October 29, 2004**

---

Staff of the Arizona Corporation Commission is currently conducting a general investigation of procedures used for estimation of demand, energy use, and time of use components of consumption of electricity. The purpose of this request is to help Staff gain a better understanding of estimation procedures used by Arizona utilities for billing purposes when they do not have access to valid meter readings. We would appreciate your response to these questions. Please respond within 2 weeks of issuance of this request. Should you have questions or concerns about the questions contained in this inquiry, please contact Steve Irvine of Commission Staff at (602)542-0824.

- STAFF 5-1 Please submit to Commission Staff a *detailed* description of your meter estimation procedures. Your response should include the following:
- a) Detailed descriptions of estimation procedures for each of the situations numbered 1-13 below.
  - b) Please provide all formulas used in estimating demand and usage.
  - c) Please provide all formulas used in time-of-use estimations.
  - d) When responding to parts a, b, and c above, please reference differences that exist in estimation methods for residential and non-residential customers.
  - e) When responding to parts a, b, and c above, please reference differences that exist in estimation methods for differing causes of estimation where applicable. Examples of differing causes for estimation include, but are not limited to: tampering, damaged meter, partial meter failure, and meter reading equipment failure.
  - f) When responding to parts a, b, and c above, please explain under what circumstances estimations are made manually or calculated by the CIS system.
  - g) When responding to parts a, b, and c above, please explain procedures to minimize the need for using estimated data where applicable.
  - h) When responding to parts a, b, and c above, please explain procedures for estimating first and final bills.

**Staff's Fifth Set of Data Requests to  
Arizona Public Service Company  
Billing Estimation and Meter Reading Inquiry  
October 29, 2004**

---

Situations include but are not limited to the following:

1. A kWh estimate with at least one year of history. Same customer at same premise or new customer with at least one year of premise history.
2. A kWh estimate with less than 12 months' history. Same customer at same premise.
3. A kWh estimate with less than 12 months' history. New customer with premise history.
4. kWh estimate. No history.
5. A kW estimate with at least one year of history. Same customer at same premise or new customer with one year of premise history.
6. kW estimate with less than 12 months' history. Same customer at same premise.
7. kW estimate with less than 12 months' history. New customer with premise history.
8. kW estimate with no history.
9. Time-of-Use (TOU) estimate with at least one year of history. Same customer at same premise or new customer with at least one year of premise history.
10. TOU estimate with less than 12 months' history. Same customer at same premise.
11. TOU estimate with less than 12 months' history. New customer with premise history.
12. TOU estimate. No history. New customer at new premise.
13. Should you have procedures in place to respond to circumstances not listed above, please describe both the circumstances and applicable procedures for estimation.

Staff 5-2      Please describe the extent to which your utility considers customer specific data when estimating demand, usage, and time-of-use.

COMMISSIONERS  
MARC SPITZER - Chairman  
WILLIAM A. MUNDELL  
JEFF HATCH-MILLER  
MIKE GLEASON  
KRISTIN K. MAYES



BRIAN C. MCNEIL  
Executive Secretary

ARIZONA CORPORATION COMMISSION

October 29, 2004

Russell E. Jones, Esq.  
Waterfall Economidis Caldwell Hanshaw & Villamana PC  
5210 E. Williams Circle, Suite 800  
Tucson, AZ 85711-7497

Re: Staff's **First** Set of Data Requests to Trico Electric Cooperative, Inc.  
Billing Estimation and Meter Reading Inquiry

Dear Mr. Jones:

Please treat this as Staff's **first** set of data requests to Trico Electric Cooperative, Inc. in the above-referenced matter.

For purposes of this data request set, the words "Trico," "you," and "your" refer to Trico Electric Cooperative, Inc., and any representative, including every person and/or entity acting with, under the control of, or on behalf of Trico Electric Cooperative, Inc. For each answer, please identify by name, title, and address each person providing information that forms the basis for the response provided.

These data requests are continuing, and your answers or any documents supplied in response to these data requests should be supplemented with any additional information or documents that come to your attention after you have provided your initial responses.

Please respond within ten calendar days of your receipt of this letter. **Please provide one hard copy of the requested data directly to each of the following addressees.**

- (1) Erinn Andreasen, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (2) Steve Irvine, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (3) Caroline Butler, Legal Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.

Sincerely,

Janet Wagner  
Attorney, Legal Division  
(602) 542-3402

JW:vk

Attachment

cc: Erinn Andreasen  
Steve Irvine

**Staff's First Set of Data Requests to  
Trico Electric Cooperative, Inc.  
Billing Estimation and Meter Reading Inquiry  
October 29, 2004**

---

Staff of the Arizona Corporation Commission is currently conducting a general investigation of procedures used for estimation of demand, energy use, and time of use components of consumption of electricity. The purpose of this request is to help Staff gain a better understanding of estimation procedures used by Arizona utilities for billing purposes when they do not have access to valid meter readings. We would appreciate your response to these questions. Please respond within 2 weeks of issuance of this request. Should you have questions or concerns about the questions contained in this inquiry, please contact Steve Irvine of Commission Staff at (602)542-0824.

- STAFF 1-1 Please submit to Commission Staff a *detailed* description of your meter estimation procedures. Your response should include the following:
- a) Detailed descriptions of estimation procedures for each of the situations numbered 1-13 below.
  - b) Please provide all formulas used in estimating demand and usage.
  - c) Please provide all formulas used in time-of-use estimations.
  - d) When responding to parts a, b, and c above, please reference differences that exist in estimation methods for residential and non-residential customers.
  - e) When responding to parts a, b, and c above, please reference differences that exist in estimation methods for differing causes of estimation where applicable. Examples of differing causes for estimation include, but are not limited to: tampering, damaged meter, partial meter failure, and meter reading equipment failure.
  - f) When responding to parts a, b, and c above, please explain under what circumstances estimations are made manually or calculated by the CIS system.
  - g) When responding to parts a, b, and c above, please explain procedures to minimize the need for using estimated data where applicable.
  - h) When responding to parts a, b, and c above, please explain procedures for estimating first and final bills.

**Staff's First Set of Data Requests to  
Trico Electric Cooperative, Inc.  
Billing Estimation and Meter Reading Inquiry  
October 29, 2004**

---

Situations include but are not limited to the following:

1. A kWh estimate with at least one year of history. Same customer at same premise or new customer with at least one year of premise history.
2. A kWh estimate with less than 12 months' history. Same customer at same premise.
3. A kWh estimate with less than 12 months' history. New customer with premise history.
4. kWh estimate. No history.
5. A kW estimate with at least one year of history. Same customer at same premise or new customer with one year of premise history.
6. kW estimate with less than 12 months' history. Same customer at same premise.
7. kW estimate with less than 12 months' history. New customer with premise history.
8. kW estimate with no history.
9. Time-of-Use (TOU) estimate with at least one year of history. Same customer at same premise or new customer with at least one year of premise history.
10. TOU estimate with less than 12 months' history. Same customer at same premise.
11. TOU estimate with less than 12 months' history. New customer with premise history.
12. TOU estimate. No history. New customer at new premise.
13. Should you have procedures in place to respond to circumstances not listed above, please describe both the circumstances and applicable procedures for estimation.

STAFF 1-2 Please describe the extent to which your utility considers customer specific data when estimating demand, usage, and time-of-use.

COMMISSIONERS  
MARC SPITZER - Chairman  
WILLIAM A. MUNDELL  
JEFF HATCH-MILLER  
MIKE GLEASON  
KRISTIN K. MAYES



BRIAN C. MCNEIL  
Executive Secretary

ARIZONA CORPORATION COMMISSION

October 29, 2004

Raymond S. Heyman, Esq.  
Roshka Heyman & DeWulf, PLC  
400 E. Van Buren, Suite 800  
Phoenix, AZ 85004-2262

Re: Staff's **First Set of Data Requests to Tucson Electric Power Company**  
Billing Estimation and Meter Reading Inquiry

Dear Mr. Heyman:

Please treat this as Staff's **first** set of data requests to Tucson Electric Power Company in the above-referenced matter.

For purposes of this data request set, the words "TEP," "you," and "your" refer to Tucson Electric Power Company, and any representative, including every person and/or entity acting with, under the control of, or on behalf of Tucson Electric Power Company. For each answer, please identify by name, title, and address each person providing information that forms the basis for the response provided.

These data requests are continuing, and your answers or any documents supplied in response to these data requests should be supplemented with any additional information or documents that come to your attention after you have provided your initial responses.

Please respond within **ten** calendar days of your receipt of this letter. **Please provide one hard copy of the requested data directly to each of the following addressees.**

- (1) Erinn Andreasen, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (2) Steve Irvine, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (3) Caroline Butler, Legal Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.

Sincerely,

Janet Wagner  
Attorney, Legal Division  
(602) 542-3402

JW:vk  
Attachment  
cc: Erinn Andreasen  
Steve Irvine



**Staff's First Set of Data Requests to  
Tucson Electric Power Company  
Billing Estimation and Meter Reading Inquiry  
October 29, 2004**

---

Staff of the Arizona Corporation Commission is currently conducting a general investigation of procedures used for estimation of demand, energy use, and time of use components of consumption of electricity. The purpose of this request is to help Staff gain a better understanding of estimation procedures used by Arizona utilities for billing purposes when they do not have access to valid meter readings. We would appreciate your response to these questions. Please respond within 2 weeks of issuance of this request. Should you have questions or concerns about the questions contained in this inquiry, please contact Steve Irvine of Commission Staff at (602)542-0824.

- STAFF 1-1 Please submit to Commission Staff a *detailed* description of your meter estimation procedures. Your response should include the following:
- a) Detailed descriptions of estimation procedures for each of the situations numbered 1-13 below.
  - b) Please provide all formulas used in estimating demand and usage.
  - c) Please provide all formulas used in time-of-use estimations.
  - d) When responding to parts a, b, and c above, please reference differences that exist in estimation methods for residential and non-residential customers.
  - e) When responding to parts a, b, and c above, please reference differences that exist in estimation methods for differing causes of estimation where applicable. Examples of differing causes for estimation include, but are not limited to: tampering, damaged meter, partial meter failure, and meter reading equipment failure.
  - f) When responding to parts a, b, and c above, please explain under what circumstances estimations are made manually or calculated by the CIS system.
  - g) When responding to parts a, b, and c above, please explain procedures to minimize the need for using estimated data where applicable.
  - h) When responding to parts a, b, and c above, please explain procedures for estimating first and final bills.

**Staff's First Set of Data Requests to  
Tucson Electric Power Company  
Billing Estimation and Meter Reading Inquiry  
October 29, 2004**

---

Situations include but are not limited to the following:

1. A kWh estimate with at least one year of history. Same customer at same premise or new customer with at least one year of premise history.
2. A kWh estimate with less than 12 months' history. Same customer at same premise.
3. A kWh estimate with less than 12 months' history. New customer with premise history.
4. kWh estimate. No history.
5. A kW estimate with at least one year of history. Same customer at same premise or new customer with one year of premise history.
6. kW estimate with less than 12 months' history. Same customer at same premise.
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10. TOU estimate with less than 12 months' history. Same customer at same premise.
11. TOU estimate with less than 12 months history. New customer with premise history.
12. TOU estimate. No history. New customer at new premise.
13. Should you have procedures in place to respond to circumstances not listed above, please describe both the circumstances and applicable procedures for estimation.

STAFF 1-2 Please describe the extent to which your utility considers customer specific data when estimating demand, usage, and time-of-use.

**COMMISSIONERS**  
MARC SPITZER - Chairman  
WILLIAM A. MUNDELL  
JEFF HATCH-MILLER  
MIKE GLEASON  
KRISTIN K. MAYES



BRIAN C. MCNEIL  
Executive Secretary

**ARIZONA CORPORATION COMMISSION**

October 29, 2004

Raymond S. Heyman, Esq.  
Roshka Heyman & DeWulf, PLC  
400 E. Van Buren, Suite 800  
Phoenix, AZ 85004-2262

Re: Staff's **First** Set of Data Requests to UNS Electric  
Billing Estimation and Meter Reading Inquiry

Dear Mr. Heyman:

Please treat this as Staff's **first** set of data requests to UNS Electric in the above-referenced matter.

For purposes of this data request set, the words "UNS," "you," and "your" refer to UNS Electric, and any representative, including every person and/or entity acting with, under the control of, or on behalf of UNS Electric. For each answer, please identify by name, title, and address each person providing information that forms the basis for the response provided.

These data requests are continuing, and your answers or any documents supplied in response to these data requests should be supplemented with any additional information or documents that come to your attention after you have provided your initial responses.

Please respond within **ten** calendar days of your receipt of this letter. **Please provide one hard copy of the requested data directly to each of the following addressees.**

- (1) Erinn Andreasen, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (2) Steve Irvine, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (3) Caroline Butler, Legal Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.

Sincerely,

Janet Wagner  
Attorney, Legal Division  
(602) 542-3402

JW:vk  
Attachment  
cc: Erinn Andreasen  
Steve Irvine

Staff's First Set of Data Requests to  
UNS Electric  
Billing Estimation and Meter Reading Inquiry  
October 29, 2004

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Staff of the Arizona Corporation Commission is currently conducting a general investigation of procedures used for estimation of demand, energy use, and time of use components of consumption of electricity. The purpose of this request is to help Staff gain a better understanding of estimation procedures used by Arizona utilities for billing purposes when they do not have access to valid meter readings. We would appreciate your response to these questions. Please respond within 2 weeks of issuance of this request. Should you have questions or concerns about the questions contained in this inquiry, please contact Steve Irvine of Commission Staff at (602)542-0824.

- STAFF 1-1 Please submit to Commission Staff a *detailed* description of your meter estimation procedures. Your response should include the following:
- a) Detailed descriptions of estimation procedures for each of the situations numbered 1-13 below.
  - b) Please provide all formulas used in estimating demand and usage.
  - c) Please provide all formulas used in time-of-use estimations.
  - d) When responding to parts a, b, and c above, please reference differences that exist in estimation methods for residential and non-residential customers.
  - e) When responding to parts a, b, and c above, please reference differences that exist in estimation methods for differing causes of estimation where applicable. Examples of differing causes for estimation include, but are not limited to: tampering, damaged meter, partial meter failure, and meter reading equipment failure.
  - f) When responding to parts a, b, and c above, please explain under what circumstances estimations are made manually or calculated by the CIS system.
  - g) When responding to parts a, b, and c above, please explain procedures to minimize the need for using estimated data where applicable.
  - h) When responding to parts a, b, and c above, please explain procedures for estimating first and final bills.

**Staff's First Set of Data Requests to  
UNS Electric  
Billing Estimation and Meter Reading Inquiry  
October 29, 2004**

---

Situations include but are not limited to the following:

1. A kWh estimate with at least one year of history. Same customer at same premise or new customer with at least one year of premise history.
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13. Should you have procedures in place to respond to circumstances not listed above, please describe both the circumstances and applicable procedures for estimation.

STAFF 1-2 Please describe the extent to which your utility considers customer specific data when estimating demand, usage, and time-of-use.

COMMISSIONERS  
MARC SPITZER - Chairman  
WILLIAM A. MUNDELL  
JEFF HATCH-MILLER  
MIKE GLEASON  
KRISTIN K. MAYES



BRIAN C. MCNEIL  
Executive Secretary

ARIZONA CORPORATION COMMISSION

October 29, 2004

Christopher Hitchcock, Esq.  
Copper Queen Plaza  
P.O. Box AT  
Bisbee, AZ 85603-0115

Re: Staff's First Set of Data Requests to Sulphur Springs Valley Electric Cooperative, Inc.  
Billing Estimation and Meter Reading Inquiry

Dear Mr. Hitchcock:

Please treat this as Staff's **first** set of data requests to Sulphur Springs Valley Electric Cooperative, Inc. in the above-referenced matter.

For purposes of this data request set, the words "Sulphur Springs," "you," and "your" refer to Sulphur Springs Valley Electric Cooperative, Inc., and any representative, including every person and/or entity acting with, under the control of, or on behalf of Sulphur Springs Valley Electric Cooperative, Inc. For each answer, please identify by name, title, and address each person providing information that forms the basis for the response provided.

These data requests are continuing, and your answers or any documents supplied in response to these data requests should be supplemented with any additional information or documents that come to your attention after you have provided your initial responses.

Please respond within **ten** calendar days of your receipt of this letter. **Please provide one hard copy of the requested data directly to each of the following addressees.**

- (1) Erinn Andreasen, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (2) Steve Irvine, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (3) Caroline Butler, Legal Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.

Sincerely,

Janet Wagner  
Attorney, Legal Division  
(602) 542-3402

JW:vk

Attachment

cc: Erinn Andreasen  
Steve Irvine

Staff's First Set of Data Requests to  
Sulphur Springs Valley Electric Cooperative, Inc.  
Billing Estimation and Meter Reading Inquiry  
October 29, 2004

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Staff of the Arizona Corporation Commission is currently conducting a general investigation of procedures used for estimation of demand, energy use, and time of use components of consumption of electricity. The purpose of this request is to help Staff gain a better understanding of estimation procedures used by Arizona utilities for billing purposes when they do not have access to valid meter readings. We would appreciate your response to these questions. Please respond within 2 weeks of issuance of this request. Should you have questions or concerns about the questions contained in this inquiry, please contact Steve Irvine of Commission Staff at (602)542-0824.

- STAFF 1-1 Please submit to Commission Staff a *detailed* description of your meter estimation procedures. Your response should include the following:
- a) Detailed descriptions of estimation procedures for each of the situations numbered 1-13 below.
  - b) Please provide all formulas used in estimating demand and usage.
  - c) Please provide all formulas used in time-of-use estimations.
  - d) When responding to parts a, b, and c above, please reference differences that exist in estimation methods for residential and non-residential customers.
  - e) When responding to parts a, b, and c above, please reference differences that exist in estimation methods for differing causes of estimation where applicable. Examples of differing causes for estimation include, but are not limited to: tampering, damaged meter, partial meter failure, and meter reading equipment failure.
  - f) When responding to parts a, b, and c above, please explain under what circumstances estimations are made manually or calculated by the CIS system.
  - g) When responding to parts a, b, and c above, please explain procedures to minimize the need for using estimated data where applicable.
  - h) When responding to parts a, b, and c above, please explain procedures for estimating first and final bills.

**Staff's First Set of Data Requests to  
Sulphur Springs Valley Electric Cooperative, Inc.  
Billing Estimation and Meter Reading Inquiry  
October 29, 2004**

---

Situations include but are not limited to the following:

1. A kWh estimate with at least one year of history. Same customer at same premise or new customer with at least one year of premise history.
2. A kWh estimate with less than 12 months' history. Same customer at same premise.
3. A kWh estimate with less than 12 months' history. New customer with premise history.
4. kWh estimate. No history.
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12. TOU estimate. No history. New customer at new premise.
13. Should you have procedures in place to respond to circumstances not listed above, please describe both the circumstances and applicable procedures for estimation.

STAFF 1-2 Please describe the extent to which your utility considers customer specific data when estimating demand, usage, and time-of-use.



**COMMISSIONERS**  
MARC SPITZER - Chairman  
WILLIAM A. MUNDELL  
JEFF HATCH-MILLER  
MIKE GLEASON  
KRISTIN K. MAYES



BRIAN C. MCNEIL  
Executive Secretary

**ARIZONA CORPORATION COMMISSION**

October 29, 2004

Thomas L. Mumaw, Esq.  
Senior Attorney  
Pinnacle West Capital Corporation  
Mail Station 8695  
400 North Fifth Street, P.O. Box 53999  
Phoenix, AZ 85072-3999

Thomas.Mumaw@pinnaclewest.com  
FAX: (602) 250-3393  
Via First-Class Mail

Re: Staff's **Fifth** Set of Data Requests to Arizona Public Service Company  
Billing Estimation and Meter Reading Inquiry

Dear Mr. Mumaw:

Please treat this as Staff's **fifth** set of data requests to Arizona Public Service Company in the above-referenced matter.

For purposes of this data request set, the words "APS," "you," and "your" refer to Arizona Public Service Company, and any representative, including every person and/or entity acting with, under the control of, or on behalf of Arizona Public Service Company. For each answer, please identify by name, title, and address each person providing information that forms the basis for the response provided.

These data requests are continuing, and your answers or any documents supplied in response to these data requests should be supplemented with any additional information or documents that come to your attention after you have provided your initial responses.

Please respond within **ten** calendar days of your receipt of this letter. **Please provide one hard copy of the requested data directly to each of the following addresses.**

- (1) Erinn Andreasen, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (2) Steve Irvine, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.

Thomas L. Mumaw, Esq.

Page 2

October 28, 2004

- (3) Caroline Butler, Legal Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.

Sincerely,



Janet Wagner  
Attorney, Legal Division  
(602) 542-3402

JW:vk

Attachment

cc: Erinn Andreasen

Steve Irvine

Jana Van Ness [[Jana.VanNess@aps.com](mailto:Jana.VanNess@aps.com)]

**Staff's Fifth Set of Data Requests to  
Arizona Public Service Company  
Billing Estimation and Meter Reading Inquiry  
October 29, 2004**

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Staff of the Arizona Corporation Commission is currently conducting a general investigation of procedures used for estimation of demand, energy use, and time of use components of consumption of electricity. The purpose of this request is to help Staff gain a better understanding of estimation procedures used by Arizona utilities for billing purposes when they do not have access to valid meter readings. We would appreciate your response to these questions. Please respond within 2 weeks of issuance of this request. Should you have questions or concerns about the questions contained in this inquiry, please contact Steve Irvine of Commission Staff at (602)542-0824.

STAFF 5-1 Please submit to Commission Staff a *detailed* description of your meter estimation procedures. Your response should include the following:

- a) Detailed descriptions of estimation procedures for each of the situations numbered 1-13 below.
- b) Please provide all formulas used in estimating demand and usage.
- c) Please provide all formulas used in time-of-use estimations.
- d) When responding to parts a, b, and c above, please reference differences that exist in estimation methods for residential and non-residential customers.
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- f) When responding to parts a, b, and c above, please explain under what circumstances estimations are made manually or calculated by the CIS system.
- g) When responding to parts a, b, and c above, please explain procedures to minimize the need for using estimated data where applicable.
- h) When responding to parts a, b, and c above, please explain procedures for estimating first and final bills.

**Staff's Fifth Set of Data Requests to  
Arizona Public Service Company  
Billing Estimation and Meter Reading Inquiry  
October 29, 2004**

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Situations include but are not limited to the following:

1. A kWh estimate with at least one year of history. Same customer at same premise or new customer with at least one year of premise history.
2. A kWh estimate with less than 12 months' history. Same customer at same premise.
3. A kWh estimate with less than 12 months' history. New customer with premise history.
4. kWh estimate. No history.
5. A kW estimate with at least one year of history. Same customer at same premise or new customer with one year of premise history.
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12. TOU estimate. No history. New customer at new premise.
13. Should you have procedures in place to respond to circumstances not listed above, please describe both the circumstances and applicable procedures for estimation.

Staff 5-2 Please describe the extent to which your utility considers customer specific data when estimating demand, usage, and time-of-use.

COMMISSIONERS  
MARC SPITZER - Chairman  
WILLIAM A. MUNDELL  
JEFF HATCH-MILLER  
MIKE GLEASON  
KRISTIN K. MAYES



BRIAN C. MCNEIL  
Executive Secretary

ARIZONA CORPORATION COMMISSION

October 29, 2004

Ken Langford  
PO Box 1466  
Mesa, AZ 85211

Re: Staff's **First** Set of Data Requests to the City of Mesa  
Billing Estimation and Meter Reading Inquiry

Dear Mr. Langford:

Staff of the Arizona Corporation Commission is currently conducting a general investigation of procedures used for estimation of demand, energy use, and time of use components of consumption of electricity. The purpose of this request is to help Staff gain a better understanding of estimation procedures used by Arizona utilities for billing purposes when they do not have access to valid meter readings. We would appreciate your response to these questions. Should you have questions or concerns about the questions contained in this inquiry, please contact me at (602)542-0824.

Sincerely,

Steve Irvine  
Utilities Division

SI:vk  
Attachment  
cc: Erinn Andreassen

Staff's First Set of Data Requests to  
City of Mesa  
Billing Estimation and Meter Reading Inquiry  
October 29, 2004

---

STAFF 1-1     Please submit to Commission Staff a *detailed* description of your meter estimation procedures. Your response should include the following:

- a)     Detailed descriptions of estimation procedures for each of the situations numbered 1-13 below.
- b)     Please provide all formulas used in estimating demand and usage.
- c)     Please provide all formulas used in time-of-use estimations.
- d)     When responding to parts a, b, and c above, please reference differences that exist in estimation methods for residential and non-residential customers.
- e)     When responding to parts a, b, and c above, please reference differences that exist in estimation methods for differing causes of estimation where applicable. Examples of differing causes for estimation include, but are not limited to: tampering, damaged meter, partial meter failure, and meter reading equipment failure.
- f)     When responding to parts a, b, and c above, please explain under what circumstances estimations are made manually or calculated by the CIS system.
- g)     When responding to parts a, b, and c above, please explain procedures to minimize the need for using estimated data where applicable.
- h)     When responding to parts a, b, and c above, please explain procedures for estimating first and final bills.

**Staff's First Set of Data Requests to  
City of Mesa  
Billing Estimation and Meter Reading Inquiry  
October 29, 2004**

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Situations include but are not limited to the following:

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STAFF 1-2 Please describe the extent to which your utility considers customer specific data when estimating demand, usage, and time-of-use.

**COMMISSIONERS**  
MARC SPITZER - Chairman  
WILLIAM A. MUNDELL  
JEFF HATCH-MILLER  
MIKE GLEASON  
KRISTIN K. MAYES



BRIAN C. MCNEIL  
Executive Secretary

**ARIZONA CORPORATION COMMISSION**

November 1, 2004

Jana Brandt  
Regulatory Affairs  
Salt River Project  
1521 N. Project Drive  
Tempe, AZ 85281-1298  
PAB 221

Re: Staff's First Set of Data Requests to Salt River Project  
Billing Estimation and Meter Reading Inquiry

Dear Ms. Brandt:

Staff of the Arizona Corporation Commission is currently conducting a general investigation of procedures used for estimation of demand, energy use, and time of use components of consumption of electricity. The purpose of this request is to help Staff gain a better understanding of estimation procedures used by Arizona utilities for billing purposes when they do not have access to valid meter readings. We would appreciate your response to these questions. Should you have questions or concerns about the questions contained in this inquiry, please contact me at (602)542-0824.

Sincerely,

Steve Irvine  
Utilities Division

SI:vk  
Attachment  
cc: Erinn Andreasen



**Staff's First Set of Data Requests to  
Salt River Project  
Billing Estimation and Meter Reading Inquiry  
November 1, 2004**

---

STAFF 1-1 Please submit to Commission Staff a *detailed* description of your meter estimation procedures. Your response should include the following:

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- h) When responding to parts a, b, and c above, please explain procedures for estimating first and final bills.

Situations include but are not limited to the following:

- 1. A kWh estimate with at least one year of history. Same customer at same premise or new customer with at least one year of premise history.
- 2. A kWh estimate with less than 12 months' history. Same customer at same premise.
- 3. A kWh estimate with less than 12 months' history. New customer with premise history.
- 4. kWh estimate. No history.
- 5. A kW estimate with at least one year of history. Same customer at same premise or new customer with one year of premise history.

**Staff's First Set of Data Requests to  
Salt River Project  
Billing Estimation and Meter Reading Inquiry  
November 1, 2004**

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6. kW estimate with less than 12 months' history. Same customer at same premise.
7. kW estimate with less than 12 months' history. New customer with premise history.
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9. Time-of-Use (TOU) estimate with at least one year of history. Same customer at same premise or new customer with at least one year of premise history.
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STAFF 1-2      Please describe the extent to which your utility considers customer specific data when estimating demand, usage, and time-of-use.

**COMMISSIONERS**  
MARC SPITZER - Chairman  
WILLIAM A. MUNDELL  
JEFF HATCH-MILLER  
MIKE GLEASON  
KRISTIN K. MAYES



BRIAN C. MCNEIL  
Executive Secretary

**ARIZONA CORPORATION COMMISSION**

November 2, 2004

Paul O'Dair  
Navopache Electric Cooperative, Inc.  
P.O. Box 308  
Lakeside, AZ 85929

Re: Staff's **First** Set of Data Requests to Navopache Electric Cooperative, Inc.  
Billing Estimation and Meter Reading Inquiry

Dear Mr. O'Dair:

Please treat this as Staff's **first** set of data requests to Navopache Electric Cooperative, Inc. in the above-referenced matter.

For purposes of this data request set, the words "Navopache," "you," and "your" refer to Navopache Electric Cooperative, Inc., and any representative, including every person and/or entity acting with, under the control of, or on behalf of Navopache Electric Cooperative, Inc. For each answer, please identify by name, title, and address each person providing information that forms the basis for the response provided.

These data requests are continuing, and your answers or any documents supplied in response to these data requests should be supplemented with any additional information or documents that come to your attention after you have provided your initial responses.

Please respond within ten calendar days of your receipt of this letter. **Please provide one hard copy of the requested data directly to each of the following addressees.**

- (1) Erinn Andreasen, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (2) Steve Irvine, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (3) Caroline Butler, Legal Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.

Sincerely,

Janet Wagner  
Attorney, Legal Division  
(602) 542-3402

JW:vk  
Attachment  
cc: Erinn Andreasen  
Steve Irvine

**Staff's First Set of Data Requests to  
Navopache Electric Cooperative, Inc.  
Billing Estimation and Meter Reading Inquiry  
November 2, 2004**

---

Staff of the Arizona Corporation Commission is currently conducting a general investigation of procedures used for estimation of demand, energy use, and time of use components of consumption of electricity. The purpose of this request is to help Staff gain a better understanding of estimation procedures used by Arizona utilities for billing purposes when they do not have access to valid meter readings. We would appreciate your response to these questions. Please respond within 2 weeks of issuance of this request. Should you have questions or concerns about the questions contained in this inquiry, please contact Steve Irvine of Commission Staff at (602)542-0824.

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**Staff's First Set of Data Requests to  
Navopache Electric Cooperative, Inc.  
Billing Estimation and Meter Reading Inquiry  
November 2, 2004**

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Situations include but are not limited to the following:

1. A kWh estimate with at least one year of history. Same customer at same premise or new customer with at least one year of premise history.
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3. A kWh estimate with less than 12 months' history. New customer with premise history.
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STAFF 1-2 Please describe the extent to which your utility considers customer specific data when estimating demand, usage, and time-of-use.

**COMMISSIONERS**  
MARC SPITZER - Chairman  
WILLIAM A. MUNDELL  
JEFF HATCH-MILLER  
MIKE GLEASON  
KRISTIN K. MAYES



BRIAN C. MCNEIL  
Executive Secretary

**ARIZONA CORPORATION COMMISSION**

November 2, 2004

Sharon Sutton  
Mohave Electric Cooperative, Inc.  
P.O. Box 1045  
Bullhead City, AZ 86430-1045

Re: Staff's First Set of Data Requests to Mohave Electric Cooperative, Inc.  
Billing Estimation and Meter Reading Inquiry

Dear Ms. Sutton:

Please treat this as Staff's first set of data requests to Mohave Electric Cooperative, Inc. in the above-referenced matter.

For purposes of this data request set, the words "Mohave," "you," and "your" refer to Mohave Electric Cooperative, Inc., and any representative, including every person and/or entity acting with, under the control of, or on behalf of Mohave Electric Cooperative, Inc. For each answer, please identify by name, title, and address each person providing information that forms the basis for the response provided.

These data requests are continuing, and your answers or any documents supplied in response to these data requests should be supplemented with any additional information or documents that come to your attention after you have provided your initial responses.

Please respond within ten calendar days of your receipt of this letter. Please provide one hard copy of the requested data directly to each of the following addressees.

- (1) Erinn Andreasen, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (2) Steve Irvine, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (3) Caroline Butler, Legal Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.

Sincerely,

A handwritten signature in cursive script, appearing to read "Janet", is written over the typed name.

Janet Wagner  
Attorney, Legal Division  
(602) 542-3402

JW:vk  
Attachment  
cc: Erinn Andreasen  
Steve Irvine

Staff's First Set of Data Requests to  
Mohave Electric Cooperative, Inc.  
Billing Estimation and Meter Reading Inquiry  
November 2, 2004

---

Staff of the Arizona Corporation Commission is currently conducting a general investigation of procedures used for estimation of demand, energy use, and time of use components of consumption of electricity. The purpose of this request is to help Staff gain a better understanding of estimation procedures used by Arizona utilities for billing purposes when they do not have access to valid meter readings. We would appreciate your response to these questions. Please respond within 2 weeks of issuance of this request. Should you have questions or concerns about the questions contained in this inquiry, please contact Steve Irvine of Commission Staff at (602)542-0824.

- STAFF 1-1 Please submit to Commission Staff a *detailed* description of your meter estimation procedures. Your response should include the following:
- a) Detailed descriptions of estimation procedures for each of the situations numbered 1-13 below.
  - b) Please provide all formulas used in estimating demand and usage.
  - c) Please provide all formulas used in time-of-use estimations.
  - d) When responding to parts a, b, and c above, please reference differences that exist in estimation methods for residential and non-residential customers.
  - e) When responding to parts a, b, and c above, please reference differences that exist in estimation methods for differing causes of estimation where applicable. Examples of differing causes for estimation include, but are not limited to: tampering, damaged meter, partial meter failure, and meter reading equipment failure.
  - f) When responding to parts a, b, and c above, please explain under what circumstances estimations are made manually or calculated by the CIS system.
  - g) When responding to parts a, b, and c above, please explain procedures to minimize the need for using estimated data where applicable.
  - h) When responding to parts a, b, and c above, please explain procedures for estimating first and final bills.

**Staff's First Set of Data Requests to  
Mohave Electric Cooperative, Inc.  
Billing Estimation and Meter Reading Inquiry  
November 2, 2004**

---

Situations include but are not limited to the following:

1. A kWh estimate with at least one year of history. Same customer at same premise or new customer with at least one year of premise history.
2. A kWh estimate with less than 12 months' history. Same customer at same premise.
3. A kWh estimate with less than 12 months' history. New customer with premise history.
4. kWh estimate. No history.
5. A kW estimate with at least one year of history. Same customer at same premise or new customer with one year of premise history.
6. kW estimate with less than 12 months' history. Same customer at same premise.
7. kW estimate with less than 12 months' history. New customer with premise history.
8. kW estimate with no history.
9. Time-of-Use (TOU) estimate with at least one year of history. Same customer at same premise or new customer with at least one year of premise history.
10. TOU estimate with less than 12 months' history. Same customer at same premise.
11. TOU estimate with less than 12 months history. New customer with premise history.
12. TOU estimate. No history. New customer at new premise.
13. Should you have procedures in place to respond to circumstances not listed above, please describe both the circumstances and applicable procedures for estimation.

STAFF 1-2 Please describe the extent to which your utility considers customer specific data when estimating demand, usage, and time-of-use.



**COMMISSIONERS**  
MARC SPITZER - Chairman  
WILLIAM A. MUNDELL  
JEFF HATCH-MILLER  
MIKE GLEASON  
KRISTIN K. MAYES



BRIAN C. MCNEIL  
Executive Secretary

**ARIZONA CORPORATION COMMISSION**

November 2, 2004

Carl Albrecht  
Garkane Energy Cooperative, Inc.  
P.O. Box 465  
Loa, UT 84747

Re: Staff's First Set of Data Requests to Garkane Energy Cooperative, Inc.  
Billing Estimation and Meter Reading Inquiry

Dear Mr. Albrecht:

Please treat this as Staff's **first** set of data requests to Garkane Energy Cooperative, Inc. in the above-referenced matter.

For purposes of this data request set, the words "Garkane," "you," and "your" refer to Garkane Energy Cooperative, Inc., and any representative, including every person and/or entity acting with, under the control of, or on behalf of Garkane Energy Cooperative, Inc. For each answer, please identify by name, title, and address each person providing information that forms the basis for the response provided.

These data requests are continuing, and your answers or any documents supplied in response to these data requests should be supplemented with any additional information or documents that come to your attention after you have provided your initial responses.

Please respond within **ten** calendar days of your receipt of this letter. **Please provide one hard copy of the requested data directly to each of the following addressees.**

- (1) Erinn Andreasen, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (2) Steve Irvine, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (3) Caroline Butler, Legal Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.

Sincerely,

Janet Wagner  
Attorney, Legal Division  
(602) 542-3402

JW:vk

Attachment

cc: Erinn Andreasen  
Steve Irvine

**Staff's First Set of Data Requests to  
Garkane Energy Cooperative, Inc.  
Billing Estimation and Meter Reading Inquiry  
November 2, 2004**

---

Staff of the Arizona Corporation Commission is currently conducting a general investigation of procedures used for estimation of demand, energy use, and time of use components of consumption of electricity. The purpose of this request is to help Staff gain a better understanding of estimation procedures used by Arizona utilities for billing purposes when they do not have access to valid meter readings. We would appreciate your response to these questions. Please respond within 2 weeks of issuance of this request. Should you have questions or concerns about the questions contained in this inquiry, please contact Steve Irvine of Commission Staff at (602)542-0824.

- STAFF 1-1 Please submit to Commission Staff a *detailed* description of your meter estimation procedures. Your response should include the following:
- a) Detailed descriptions of estimation procedures for each of the situations numbered 1-13 below.
  - b) Please provide all formulas used in estimating demand and usage.
  - c) Please provide all formulas used in time-of-use estimations.
  - d) When responding to parts a, b, and c above, please reference differences that exist in estimation methods for residential and non-residential customers.
  - e) When responding to parts a, b, and c above, please reference differences that exist in estimation methods for differing causes of estimation where applicable. Examples of differing causes for estimation include, but are not limited to: tampering, damaged meter, partial meter failure, and meter reading equipment failure.
  - f) When responding to parts a, b, and c above, please explain under what circumstances estimations are made manually or calculated by the CIS system.
  - g) When responding to parts a, b, and c above, please explain procedures to minimize the need for using estimated data where applicable.
  - h) When responding to parts a, b, and c above, please explain procedures for estimating first and final bills.

**Staff's First Set of Data Requests to  
Garkane Energy Cooperative, Inc.  
Billing Estimation and Meter Reading Inquiry  
November 2, 2004**

---

Situations include but are not limited to the following:

1. A kWh estimate with at least one year of history. Same customer at same premise or new customer with at least one year of premise history.
2. A kWh estimate with less than 12 months' history. Same customer at same premise.
3. A kWh estimate with less than 12 months' history. New customer with premise history.
4. kWh estimate. No history.
5. A kW estimate with at least one year of history. Same customer at same premise or new customer with one year of premise history.
6. kW estimate with less than 12 months' history. Same customer at same premise.
7. kW estimate with less than 12 months' history. New customer with premise history.
8. kW estimate with no history.
9. Time-of-Use (TOU) estimate with at least one year of history. Same customer at same premise or new customer with at least one year of premise history.
10. TOU estimate with less than 12 months' history. Same customer at same premise.
11. TOU estimate with less than 12 months history. New customer with premise history.
12. TOU estimate. No history. New customer at new premise.
13. Should you have procedures in place to respond to circumstances not listed above, please describe both the circumstances and applicable procedures for estimation.

STAFF 1-2 Please describe the extent to which your utility considers customer specific data when estimating demand, usage, and time-of-use.

COMMISSIONERS  
MARC SPITZER - Chairman  
WILLIAM A. MUNDELL  
JEFF HATCH-MILLER  
MIKE GLEASON  
KRISTIN K. MAYES



BRIAN C. MCNEIL  
Executive Secretary

ARIZONA CORPORATION COMMISSION

November 2, 2004

Michael W. Patten, Esq.  
Roshka Heyman & DeWulf, PLC  
400 E. Van Buren, Suite 800  
Phoenix, AZ 85004-2262

Re: Staff's **First** Set of Data Requests to Ajo Improvement Company  
Billing Estimation and Meter Reading Inquiry

Dear Mr. Patten:

Please treat this as Staff's **first** set of data requests to Ajo Improvement Company in the above-referenced matter.

For purposes of this data request set, the words "Ajo," "you," and "your" refer to Ajo Improvement Company, and any representative, including every person and/or entity acting with, under the control of, or on behalf of Ajo Improvement Company. For each answer, please identify by name, title, and address each person providing information that forms the basis for the response provided.

These data requests are continuing, and your answers or any documents supplied in response to these data requests should be supplemented with any additional information or documents that come to your attention after you have provided your initial responses.

Please respond within **ten** calendar days of your receipt of this letter. **Please provide one hard copy of the requested data directly to each of the following addressees.**

- (1) Erinn Andreasen, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (2) Steve Irvine, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (3) Caroline Butler, Legal Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.

Sincerely,

A handwritten signature in dark ink, appearing to read "Janet Wagner".

Janet Wagner  
Attorney, Legal Division  
(602) 542-3402

JW:vk  
Attachment  
cc: Erinn Andreasen  
Steve Irvine

**Staff's First Set of Data Requests to  
Ajo Improvement Company  
Billing Estimation and Meter Reading Inquiry  
November 2, 2004**

---

Staff of the Arizona Corporation Commission is currently conducting a general investigation of procedures used for estimation of demand, energy use, and time of use components of consumption of electricity. The purpose of this request is to help Staff gain a better understanding of estimation procedures used by Arizona utilities for billing purposes when they do not have access to valid meter readings. We would appreciate your response to these questions. Please respond within 2 weeks of issuance of this request. Should you have questions or concerns about the questions contained in this inquiry, please contact Steve Irvine of Commission Staff at (602)542-0824.

- STAFF 1-1    Please submit to Commission Staff a *detailed* description of your meter estimation procedures. Your response should include the following:
- a)    Detailed descriptions of estimation procedures for each of the situations numbered 1-13 below.
  - b)    Please provide all formulas used in estimating demand and usage.
  - c)    Please provide all formulas used in time-of-use estimations.
  - d)    When responding to parts a, b, and c above, please reference differences that exist in estimation methods for residential and non-residential customers.
  - e)    When responding to parts a, b, and c above, please reference differences that exist in estimation methods for differing causes of estimation where applicable. Examples of differing causes for estimation include, but are not limited to: tampering, damaged meter, partial meter failure, and meter reading equipment failure.
  - f)    When responding to parts a, b, and c above, please explain under what circumstances estimations are made manually or calculated by the CIS system.
  - g)    When responding to parts a, b, and c above, please explain procedures to minimize the need for using estimated data where applicable.
  - h)    When responding to parts a, b, and c above, please explain procedures for estimating first and final bills.

**Staff's First Set of Data Requests to  
Ajo Improvement Company  
Billing Estimation and Meter Reading Inquiry  
November 2, 2004**

---

Situations include but are not limited to the following:

1. A kWh estimate with at least one year of history. Same customer at same premise or new customer with at least one year of premise history.
2. A kWh estimate with less than 12 months' history. Same customer at same premise.
3. A kWh estimate with less than 12 months' history. New customer with premise history.
4. kWh estimate. No history.
5. A kW estimate with at least one year of history. Same customer at same premise or new customer with one year of premise history.
6. kW estimate with less than 12 months' history. Same customer at same premise.
7. kW estimate with less than 12 months' history. New customer with premise history.
8. kW estimate with no history.
9. Time-of-Use (TOU) estimate with at least one year of history. Same customer at same premise or new customer with at least one year of premise history.
10. TOU estimate with less than 12 months' history. Same customer at same premise.
11. TOU estimate with less than 12 months history. New customer with premise history.
12. TOU estimate. No history. New customer at new premise.
13. Should you have procedures in place to respond to circumstances not listed above, please describe both the circumstances and applicable procedures for estimation.

STAFF 1-2      Please describe the extent to which your utility considers customer specific data when estimating demand, usage, and time-of-use.

COMMISSIONERS  
MARC SPITZER - Chairman  
WILLIAM A. MUNDELL  
JEFF HATCH-MILLER  
MIKE GLEASON  
KRISTIN K. MAYES



BRIAN C. MCNEIL  
Executive Secretary

ARIZONA CORPORATION COMMISSION

November 2, 2004

Michael M. Grant, Esq.  
Gallagher & Kennedy, PA  
2575 E. Camelback Rd.  
Phoenix, AZ 85016-9225

Re: Staff's **First** Set of Data Requests to Duncan Valley Electric Cooperative, Inc.  
Billing Estimation and Meter Reading Inquiry

Dear Mr. Grant:

Please treat this as Staff's **first** set of data requests to Duncan Valley Electric Cooperative, Inc. in the above-referenced matter.

For purposes of this data request set, the words "Duncan Valley," "you," and "your" refer to Duncan Valley Electric Cooperative, Inc., and any representative, including every person and/or entity acting with, under the control of, or on behalf of Duncan Valley Electric Cooperative, Inc. For each answer, please identify by name, title, and address each person providing information that forms the basis for the response provided.

These data requests are continuing, and your answers or any documents supplied in response to these data requests should be supplemented with any additional information or documents that come to your attention after you have provided your initial responses.

Please respond within ten calendar days of your receipt of this letter. **Please provide one hard copy of the requested data directly to each of the following addressees.**

- (1) Erinn Andreasen, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (2) Steve Irvine, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (3) Caroline Butler, Legal Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.

Sincerely,

Janet Wagner  
Attorney, Legal Division  
(602) 542-3402

JW:vk  
Attachment  
cc: Erinn Andreasen  
Steve Irvine

Staff's First Set of Data Requests to  
Duncan Valley electric Cooperative, Inc.  
Billing Estimation and Meter Reading Inquiry  
November 2, 2004

---

Staff of the Arizona Corporation Commission is currently conducting a general investigation of procedures used for estimation of demand, energy use, and time of use components of consumption of electricity. The purpose of this request is to help Staff gain a better understanding of estimation procedures used by Arizona utilities for billing purposes when they do not have access to valid meter readings. We would appreciate your response to these questions. Please respond within 2 weeks of issuance of this request. Should you have questions or concerns about the questions contained in this inquiry, please contact Steve Irvine of Commission Staff at (602)542-0824.

- STAFF 1-1 Please submit to Commission Staff a *detailed* description of your meter estimation procedures. Your response should include the following:
- a) Detailed descriptions of estimation procedures for each of the situations numbered 1-13 below.
  - b) Please provide all formulas used in estimating demand and usage.
  - c) Please provide all formulas used in time-of-use estimations.
  - d) When responding to parts a, b, and c above, please reference differences that exist in estimation methods for residential and non-residential customers.
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  - f) When responding to parts a, b, and c above, please explain under what circumstances estimations are made manually or calculated by the CIS system.
  - g) When responding to parts a, b, and c above, please explain procedures to minimize the need for using estimated data where applicable.
  - h) When responding to parts a, b, and c above, please explain procedures for estimating first and final bills.



**Staff's First Set of Data Requests to  
Duncan Valley electric Cooperative, Inc.  
Billing Estimation and Meter Reading Inquiry  
November 2, 2004**

---

Situations include but are not limited to the following:

1. A kWh estimate with at least one year of history. Same customer at same premise or new customer with at least one year of premise history.
2. A kWh estimate with less than 12 months' history. Same customer at same premise.
3. A kWh estimate with less than 12 months' history. New customer with premise history.
4. kWh estimate. No history.
5. A kW estimate with at least one year of history. Same customer at same premise or new customer with one year of premise history.
6. kW estimate with less than 12 months' history. Same customer at same premise.
7. kW estimate with less than 12 months' history. New customer with premise history.
8. kW estimate with no history.
9. Time-of-Use (TOU) estimate with at least one year of history. Same customer at same premise or new customer with at least one year of premise history.
10. TOU estimate with less than 12 months' history. Same customer at same premise.
11. TOU estimate with less than 12 months history. New customer with premise history.
12. TOU estimate. No history. New customer at new premise.
13. Should you have procedures in place to respond to circumstances not listed above, please describe both the circumstances and applicable procedures for estimation.

STAFF 1-2 Please describe the extent to which your utility considers customer specific data when estimating demand, usage, and time-of-use.

**COMMISSIONERS**  
MARC SPITZER - Chairman  
WILLIAM A. MUNDELL  
JEFF HATCH-MILLER  
MIKE GLEASON  
KRISTIN K. MAYES



BRIAN C. MCNEIL  
Executive Secretary

ARIZONA CORPORATION COMMISSION

November 2, 2004

Michael W. Patten, Esq.  
Roshka Heyman & DeWulf, PLC  
400 E. Van Buren, Suite 800  
Phoenix, AZ 85004-2262

Re: Staff's **First** Set of Data Requests to Morenci Water and Electric Company  
Billing Estimation and Meter Reading Inquiry

Dear Mr. Patten:

Please treat this as Staff's **first** set of data requests to Morenci Water and Electric Company in the above-referenced matter.

For purposes of this data request set, the words "Morenci," "you," and "your" refer to Morenci Water and Electric Company, and any representative, including every person and/or entity acting with, under the control of, or on behalf of Morenci Water and Electric Company. For each answer, please identify by name, title, and address each person providing information that forms the basis for the response provided.

These data requests are continuing, and your answers or any documents supplied in response to these data requests should be supplemented with any additional information or documents that come to your attention after you have provided your initial responses.

Please respond within **ten** calendar days of your receipt of this letter. **Please provide one hard copy of the requested data directly to each of the following addressees.**

- (1) Erinn Andreasen, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (2) Steve Irvine, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (3) Caroline Butler, Legal Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.

Sincerely,

A handwritten signature in cursive script, appearing to read "Janet", is written over the typed name.

Janet Wagner  
Attorney, Legal Division  
(602) 542-3402

JW:vk  
Attachment  
cc: Erinn Andreasen  
Steve Irvine

Staff's First Set of Data Requests to  
Morenci Water and Electric Company  
Billing Estimation and Meter Reading Inquiry  
November 2, 2004

---

Staff of the Arizona Corporation Commission is currently conducting a general investigation of procedures used for estimation of demand, energy use, and time of use components of consumption of electricity. The purpose of this request is to help Staff gain a better understanding of estimation procedures used by Arizona utilities for billing purposes when they do not have access to valid meter readings. We would appreciate your response to these questions. Please respond within 2 weeks of issuance of this request. Should you have questions or concerns about the questions contained in this inquiry, please contact Steve Irvine of Commission Staff at (602)542-0824.

- STAFF 1-1 Please submit to Commission Staff a *detailed* description of your meter estimation procedures. Your response should include the following:
- a) Detailed descriptions of estimation procedures for each of the situations numbered 1-13 below.
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  - g) When responding to parts a, b, and c above, please explain procedures to minimize the need for using estimated data where applicable.
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**Staff's First Set of Data Requests to  
Morenci Water and Electric Company  
Billing Estimation and Meter Reading Inquiry  
November 2, 2004**

---

Situations include but are not limited to the following:

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3. A kWh estimate with less than 12 months' history. New customer with premise history.
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13. Should you have procedures in place to respond to circumstances not listed above, please describe both the circumstances and applicable procedures for estimation.

STAFF 1-2 Please describe the extent to which your utility considers customer specific data when estimating demand, usage, and time-of-use.

**COMMISSIONERS**  
MARC SPITZER - Chairman  
WILLIAM A. MUNDELL  
JEFF HATCH-MILLER  
MIKE GLEASON  
KRISTIN K. MAYES



BRIAN C. MCNEIL  
Executive Secretary

**ARIZONA CORPORATION COMMISSION**

November 2, 2004

Michael Fletcher  
Columbus Electric Cooperative, Inc.  
P.O. Box 631  
Deming, NM 88031

Re: Staff's **First Set of Data Requests to Columbus Electric Cooperative, Inc.**  
Billing Estimation and Meter Reading Inquiry

Dear Mr. Fletcher:

Please treat this as Staff's **first** set of data requests to Columbus Electric Cooperative, Inc. in the above-referenced matter.

For purposes of this data request set, the words "Columbus," "you," and "your" refer to Columbus Electric Cooperative, Inc., and any representative, including every person and/or entity acting with, under the control of, or on behalf of Columbus Electric Cooperative, Inc. For each answer, please identify by name, title, and address each person providing information that forms the basis for the response provided.

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Please respond within **ten** calendar days of your receipt of this letter. **Please provide one hard copy of the requested data directly to each of the following addressees.**

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- (2) Steve Irvine, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (3) Caroline Butler, Legal Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.

Sincerely,

Janet Wagner  
Attorney, Legal Division  
(602) 542-3402

JW:vk

Attachment

cc: Erinn Andreasen  
Steve Irvine

**Staff's First Set of Data Requests to  
Columbus Electric Cooperative, Inc.  
Billing Estimation and Meter Reading Inquiry  
November 2, 2004**

---

Staff of the Arizona Corporation Commission is currently conducting a general investigation of procedures used for estimation of demand, energy use, and time of use components of consumption of electricity. The purpose of this request is to help Staff gain a better understanding of estimation procedures used by Arizona utilities for billing purposes when they do not have access to valid meter readings. We would appreciate your response to these questions. Please respond within 2 weeks of issuance of this request. Should you have questions or concerns about the questions contained in this inquiry, please contact Steve Irvine of Commission Staff at (602)542-0824.

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**Staff's First Set of Data Requests to  
Columbus Electric Cooperative, Inc.  
Billing Estimation and Meter Reading Inquiry  
November 2, 2004**

---

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STAFF 1-2 Please describe the extent to which your utility considers customer specific data when estimating demand, usage, and time-of-use.

**COMMISSIONERS**  
MARC SPITZER - Chairman  
WILLIAM A. MUNDELL  
JEFF HATCH-MILLER  
MIKE GLEASON  
KRISTIN K. MAYES



BRIAN C. MCNEIL  
Executive Secretary

**ARIZONA CORPORATION COMMISSION**

November 2, 2004

Michael M. Grant, Esq.  
Gallagher & Kennedy, PA  
2575 E. Camelback Rd.  
Phoenix, AZ 850116-9225

Re: Staff's **First** Set of Data Requests to Graham County Electric Cooperative, Inc.  
Billing Estimation and Meter Reading Inquiry

Dear Mr. Grant:

Please treat this as Staff's **first** set of data requests to Graham County Electric Cooperative, Inc. in the above-referenced matter.

For purposes of this data request set, the words "Graham County," "you," and "your" refer to Graham County Electric Cooperative, Inc., and any representative, including every person and/or entity acting with, under the control of, or on behalf of Graham County Electric Cooperative, Inc. For each answer, please identify by name, title, and address each person providing information that forms the basis for the response provided.

These data requests are continuing, and your answers or any documents supplied in response to these data requests should be supplemented with any additional information or documents that come to your attention after you have provided your initial responses.

Please respond within **ten** calendar days of your receipt of this letter. **Please provide one hard copy of the requested data directly to each of the following addressees.**

- (1) Erinn Andreasen, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (2) Steve Irvine, Utilities Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.
- (3) Caroline Butler, Legal Division, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.

Sincerely,

A handwritten signature in cursive script, appearing to read "Janet", is written over the typed name.

Janet Wagner  
Attorney, Legal Division  
(602) 542-3402

JW:vk  
Attachment  
cc: Erinn Andreasen  
Steve Irvine



**Staff's First Set of Data Requests to  
Graham County Electric Cooperative, Inc.  
Billing Estimation and Meter Reading Inquiry  
November 2, 2004**

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Staff of the Arizona Corporation Commission is currently conducting a general investigation of procedures used for estimation of demand, energy use, and time of use components of consumption of electricity. The purpose of this request is to help Staff gain a better understanding of estimation procedures used by Arizona utilities for billing purposes when they do not have access to valid meter readings. We would appreciate your response to these questions. Please respond within 2 weeks of issuance of this request. Should you have questions or concerns about the questions contained in this inquiry, please contact Steve Irvine of Commission Staff at (602)542-0824.

STAFF 1-1 Please submit to Commission Staff a *detailed* description of your meter estimation procedures. Your response should include the following:

- a) Detailed descriptions of estimation procedures for each of the situations numbered 1-13 below.
- b) Please provide all formulas used in estimating demand and usage.
- c) Please provide all formulas used in time-of-use estimations.
- d) When responding to parts a, b, and c above, please reference differences that exist in estimation methods for residential and non-residential customers.
- e) When responding to parts a, b, and c above, please reference differences that exist in estimation methods for differing causes of estimation where applicable. Examples of differing causes for estimation include, but are not limited to: tampering, damaged meter, partial meter failure, and meter reading equipment failure.
- f) When responding to parts a, b, and c above, please explain under what circumstances estimations are made manually or calculated by the CIS system.
- g) When responding to parts a, b, and c above, please explain procedures to minimize the need for using estimated data where applicable.
- h) When responding to parts a, b, and c above, please explain procedures for estimating first and final bills.

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Situations include but are not limited to the following:

1. A kWh estimate with at least one year of history. Same customer at same premise or new customer with at least one year of premise history.
2. A kWh estimate with less than 12 months' history. Same customer at same premise.
3. A kWh estimate with less than 12 months' history. New customer with premise history.
4. kWh estimate. No history.
5. A kW estimate with at least one year of history. Same customer at same premise or new customer with one year of premise history.
6. kW estimate with less than 12 months' history. Same customer at same premise.
7. kW estimate with less than 12 months' history. New customer with premise history.
8. kW estimate with no history.
9. Time-of-Use (TOU) estimate with at least one year of history. Same customer at same premise or new customer with at least one year of premise history.
10. TOU estimate with less than 12 months' history. Same customer at same premise.
11. TOU estimate with less than 12 months history. New customer with premise history.
12. TOU estimate. No history. New customer at new premise.
13. Should you have procedures in place to respond to circumstances not listed above, please describe both the circumstances and applicable procedures for estimation.

STAFF 1-2 Please describe the extent to which your utility considers customer specific data when estimating demand, usage, and time-of-use.

## **Exhibit C**

**STAFF'S FIRST SET OF DATA REQUEST TO  
ARIZONA PUBLIC SERVICE COMPANY  
BILLING ESTIMATION AND METER READING INQUIRY  
SEPTEMBER 3, 2004**

Staff 1-9      Please explain how using class data to estimate kW complies with the rule 210.A.2. Your answer should address rule 210.A.2 both before and after the electric competition rule amendments.

**RESPONSE:**

APS does consider individual customer data in estimating kWh usage. But APS also believes that the permissive language of Rule 210 (A) (2) allows APS to use estimation factors *other than* usage during the same month of the previous year and the usage from the preceding month of the same year. The application of class average load factor to the customer's individual kWh does not bias the estimated demands and appropriately scales the demand to the estimated energy. This particular provision of Rule 210 was not amended with the adoption of the electric competition rules.

## **Exhibit D**

From: Smith, Janet M(H50500)  
Sent: Tuesday, June 18, 2002 2:38 PM  
To: Nair, Ravi (ZB1310)  
Subject: RE: Estimation

I don't think load factors change that much. We are going to compare these numbers to some other numbers we have and see how much they have varied. That will give us a better idea of frequency, but I honestly don't think we will see much change. If we only change them when we have a rate case, our last full blown rate case was 1988, so every 15-20 years. Hmm, we could have a new system by then.

By the way, if we were designing from scratch, the best way of estimating a demand would be to calculate the customers load factor for the past 12 months and use that to determine the demand for the current month. Since we didn't design from scratch, and had about 20 minutes to come up with something, we'll stick to the methodology we have now, with maybe some better numbers.

-----Original Message-----

From: Nair, Ravi (ZB1310)  
Sent: Tuesday, June 18, 2002 2:32 PM  
To: Smith, Janet M(H50500)  
Subject: RE: Estimation

Please go thru Joy.... How often do you foresee these numbers to change , typically.. guestimate??

-----Original Message-----

From: Smith, Janet M(H50500)  
Sent: Tuesday, June 18, 2002 2:31 PM  
To: Nair, Ravi (ZB1310)  
Subject: RE: Estimation

We have some new numbers based on load data that will support the rate case. the numbers are lower than what we have now, so I want to make sure if we want to use the newer numbers, it can be done painlessly. Sounds like it can so as soon as I get the buy off from Dave Rumolo on the new numbers, do I tell you, or does Joy need to write an enhancement/defect?

-----Original Message-----

From: Nair, Ravi (ZB1310)  
Sent: Tuesday, June 18, 2002 2:29 PM  
To: Smith, Janet M(H50500)  
Subject: RE: Estimation

Yes.... it is. If we foresee these numbers to change dynamically, we probably ought to have them as factors (reference table driven). But I suspect these are pretty static in nature, if we stick with the present approach to demand estimation.

-----Original Message-----

From: Smith, Janet M(H50500)  
Sent: Tuesday, June 18, 2002 2:27 PM  
To: Nair, Ravi (ZB1310)  
Subject: RE: Estimation

Ravi, if we only want to change the numbers we have in place now (the 45%, 50% and 60%) is that a simple change?

-----Original Message-----

From: Nair, Ravi (ZB1310)  
Sent: Tuesday, June 18, 2002 9:53 AM  
To: Smith, Janet M(H50500)  
Subject: Estimation

we will be putting a new exception/bsns rule... This is fyi -

-----Original Message-----

From: Nair, Ravi (ZB1310)

APS02324

## **Exhibit E**

**STAFFS THIRD SET OF DATA REQUESTS TO  
ARIZONA PUBLIC SERVICE COMPANY  
BILLING ESTIMATION AND METER READING INQUIRY  
OCTOBER 12, 2004**

STF 3-19 Referring to Exhibit APS05333, lines 22 to 25, regarding Avis Read's bills:

- a) Please describe the computer problems that prevented APS from sending a bill from September 1999 to February 2000.
- b) Did these computer problems affect other customers?
- c) If so, please indicated how many customers were affected by these same problems. For each customer, please indicate the time period over which APS failed to send a bill.

**RESPONSE:**

- a) There was a software problem in the CIS exception processing that was fixed in February 2000.
- b) Yes.
- c) 663 customers were affected by the software problem from September '99 through February '00. Please see the breakdown below:

Number of months with a Missed Statement	Count of Customer Accounts
6 months	5
5 months	28
4 months	48
3 months	143
2 months	115
1 month	324

Total 663